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Boeselager et al.

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(54) **BARCODE BOOKLET**

(71) Applicant: **AMB Media LLC**, Chattanooga, TN (US)

(72) Inventors: **Adam Michael Boeselager**, Lookout Mountain, TN (US); **Nicholas James Macco**, Chattanooga, TN (US)

(73) Assignee: **AMB Media LLC**, Chattanooga, TN (US)

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(51) **Int. Cl.**
G06K 15/12 (2006.01)
G06K 7/10 (2006.01)
G06K 19/06 (2006.01)
G06K 1/12 (2006.01)
G06K 7/14 (2006.01)

(52) **U.S. Cl.**
CPC **G06K 7/10722** (2013.01); **G06K 1/121** (2013.01); **G06K 7/10564** (2013.01); **G06K 7/1413** (2013.01); **G06K 19/06028** (2013.01)

(58) **Field of Classification Search**

CPC G06K 9/228; G06K 2209/01; G06Q 30/00; H04N 1/107
USPC 235/487, 462.01, 462.09, 462.41
See application file for complete search history.

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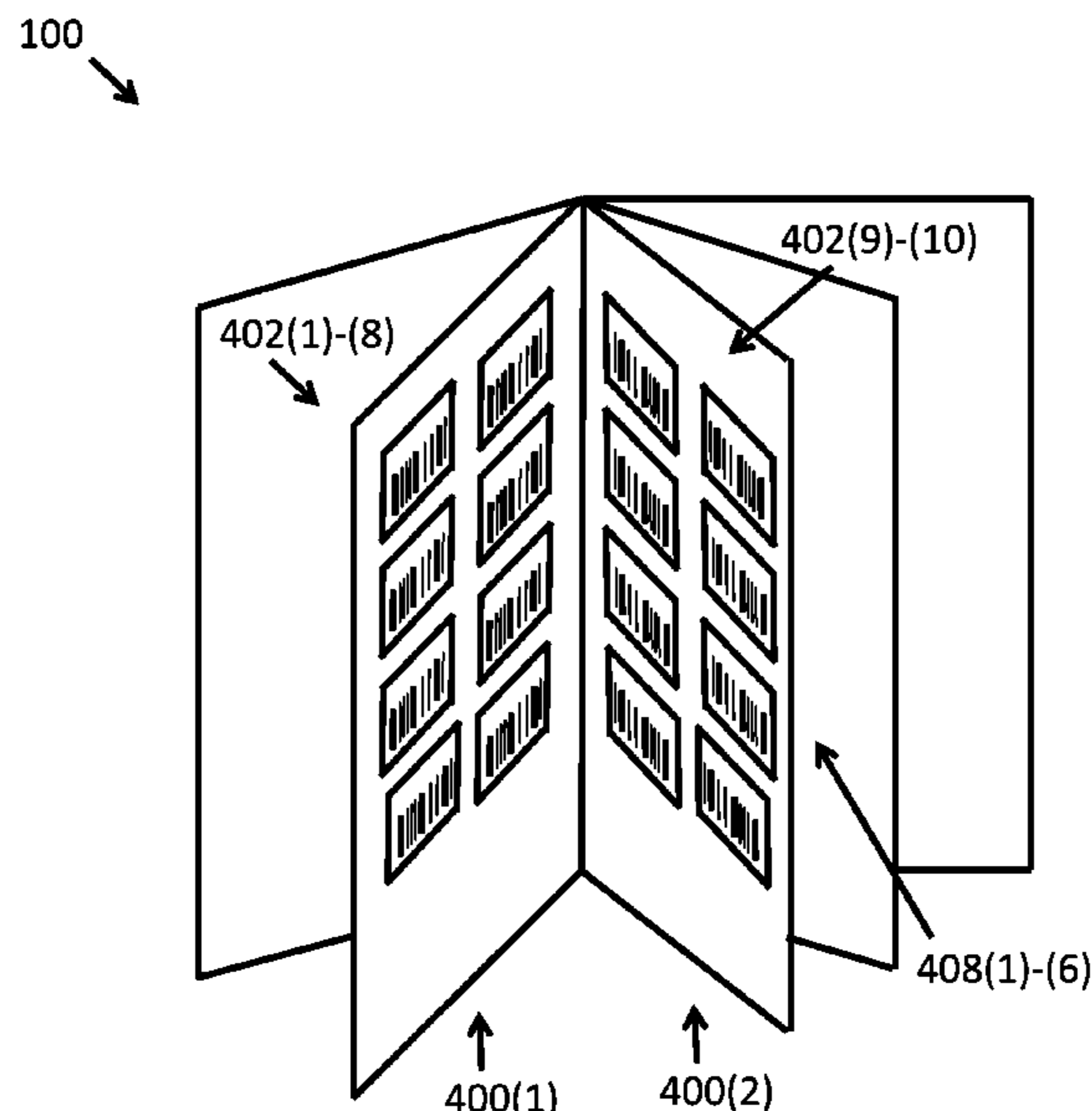
Primary Examiner — Daniel St Cyr

(74) *Attorney, Agent, or Firm* — Waller Lansden Dortch & Davis, LLP; Matthew C. Cox

(57) **ABSTRACT**

A booklet may include multiple customized booklet pages. The booklet pages may include including a barcode page that may include multiple barcode labels that can be selectively disposed on physical media items. The booklet pages may include pages with instructions, upgrade labels, shipping labels, or other information. The booklet pages may be customized to a customer digitization order. A system with a barcode scanner, physical media item converter, and a computing device may scan the barcode labels of the physical media items, read the content stored on the physical media items, convert the content to a digital format, and associate the digitally formatted content with the corresponding barcode label. The system may allow a customer to access the content in the digital format, such as a DVD, digital download, or a thumb drive.

20 Claims, 25 Drawing Sheets



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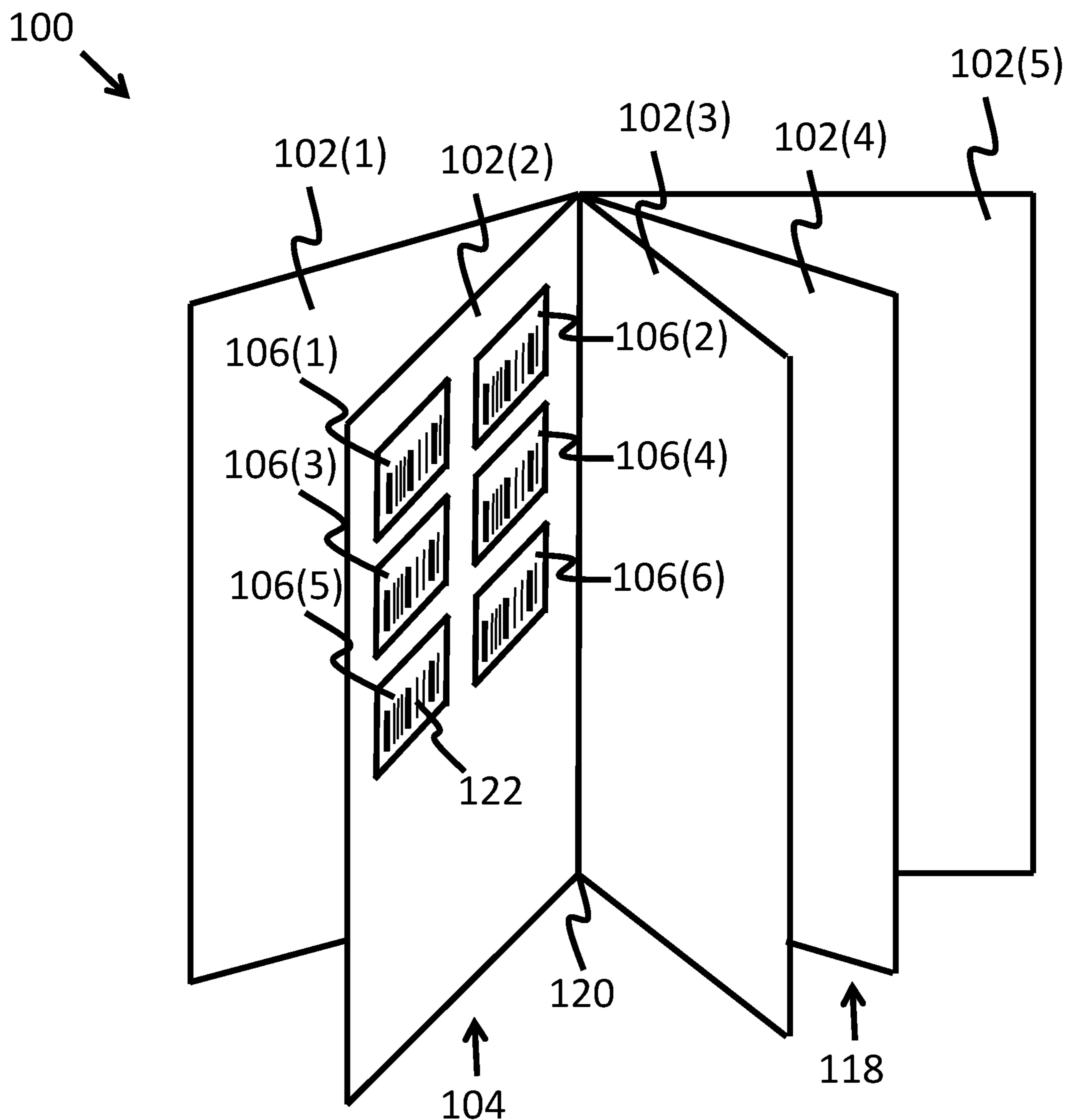


FIG. 1A

104
↓

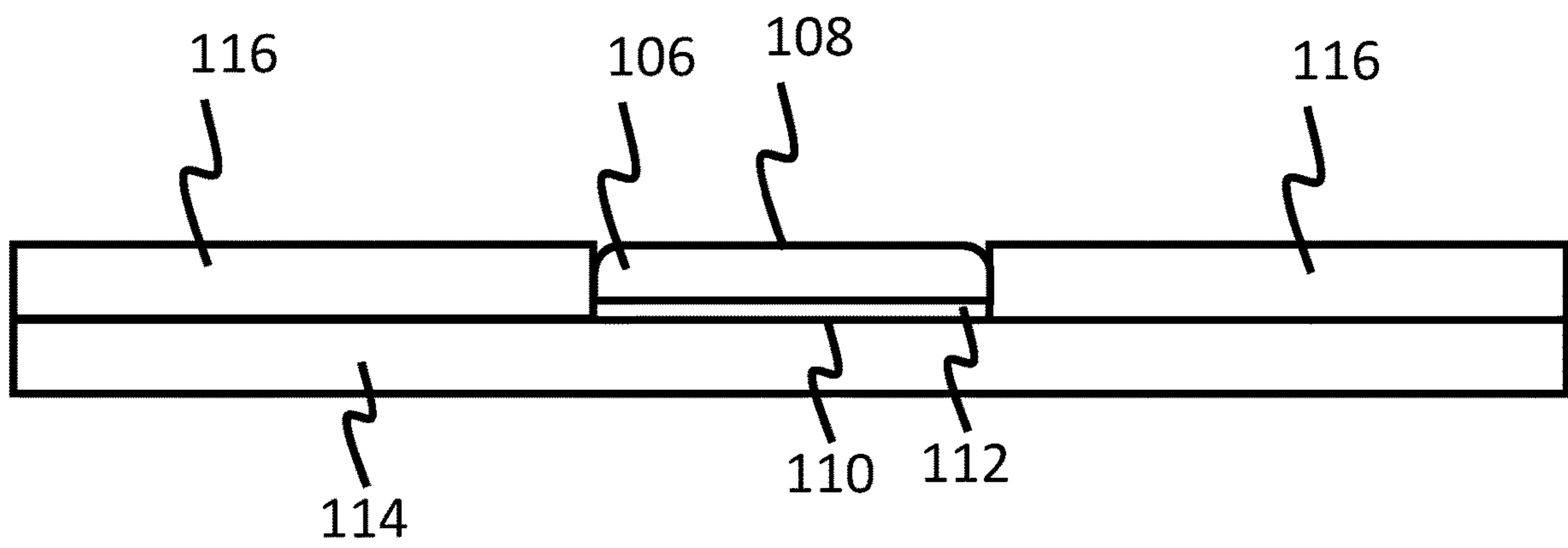
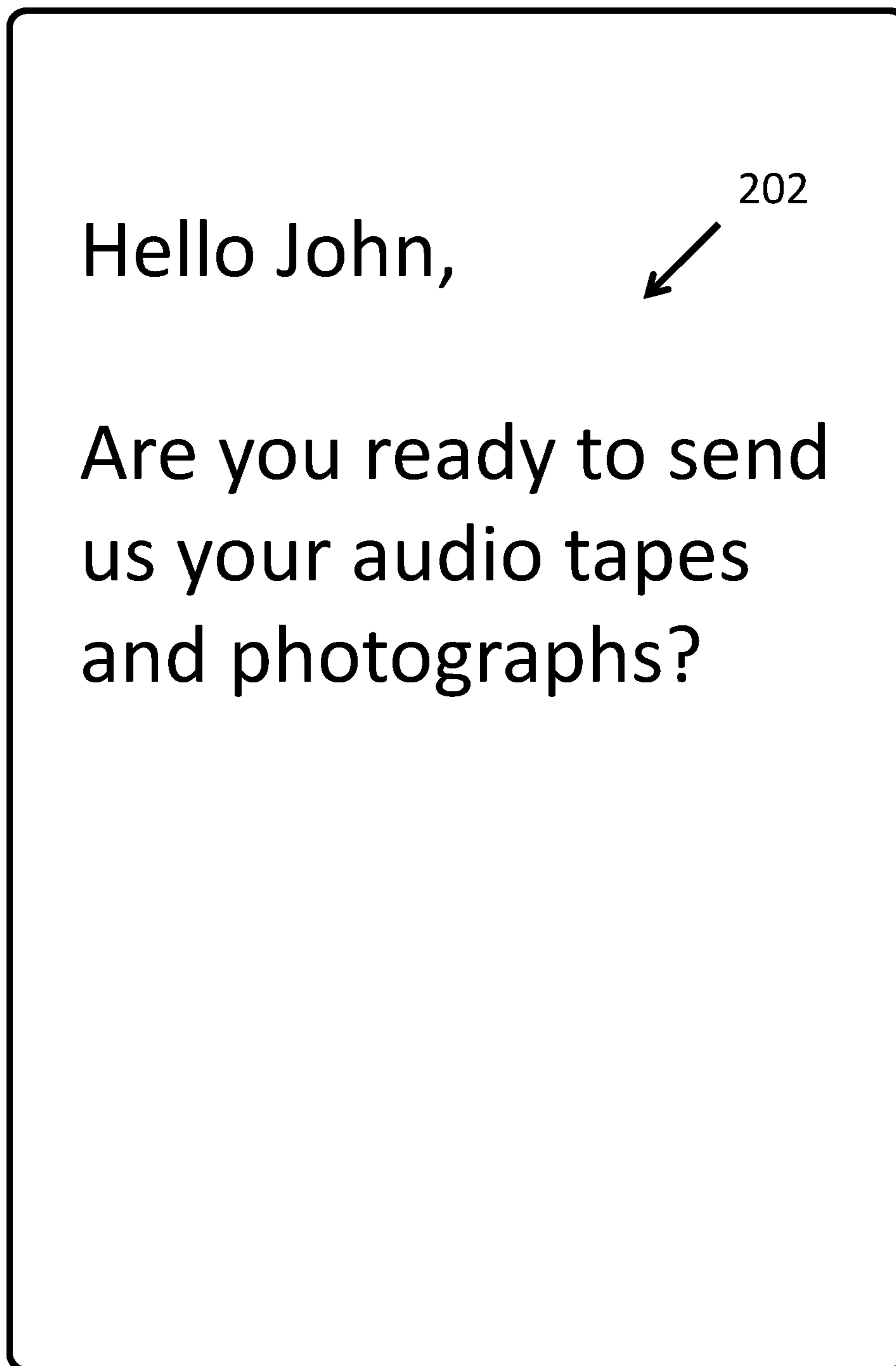


FIG. 1B

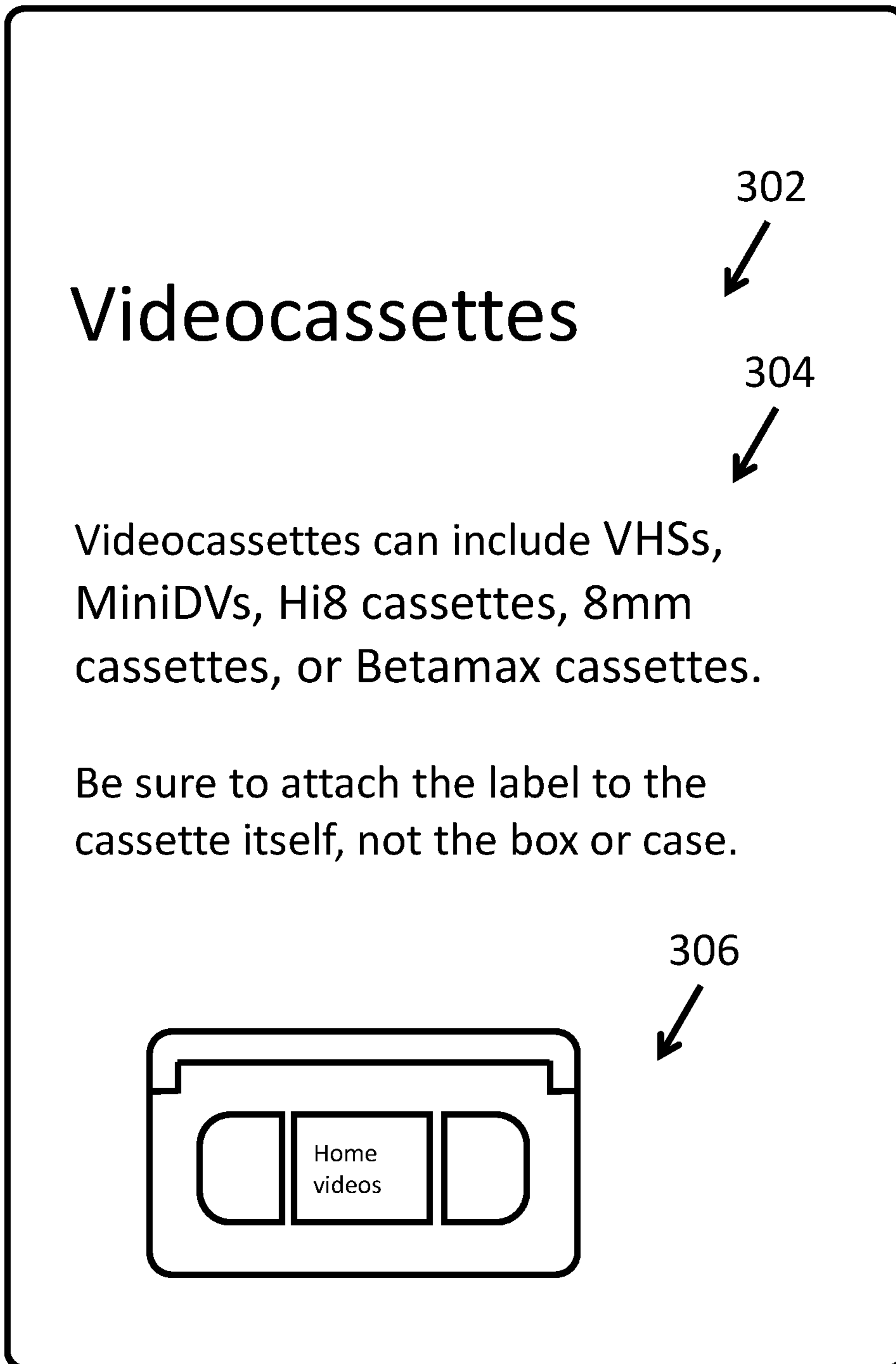
118
↓



202
↓

FIG. 2

118



302



304



306



FIG. 3



FIG. 4A

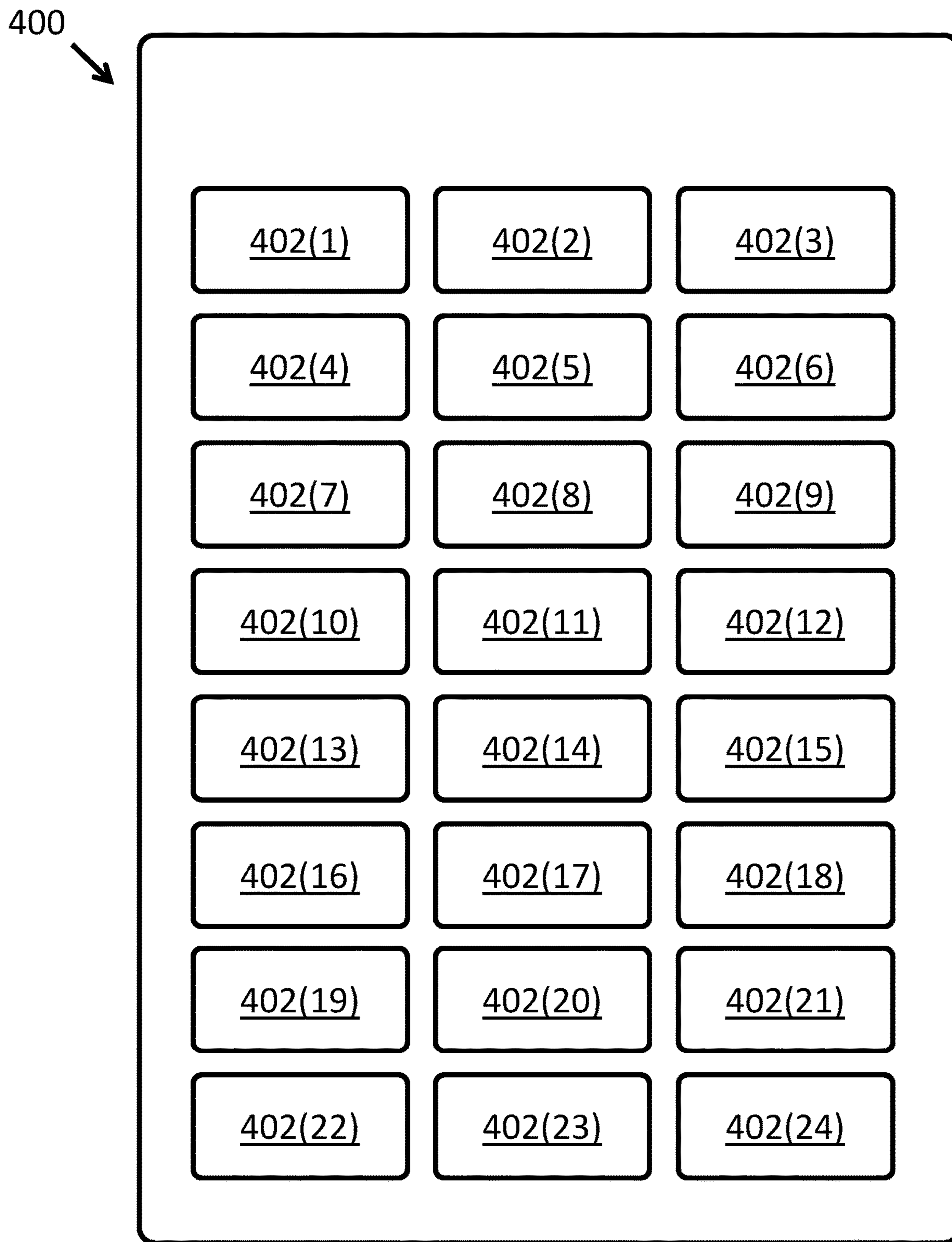


FIG. 4B



FIG. 4C

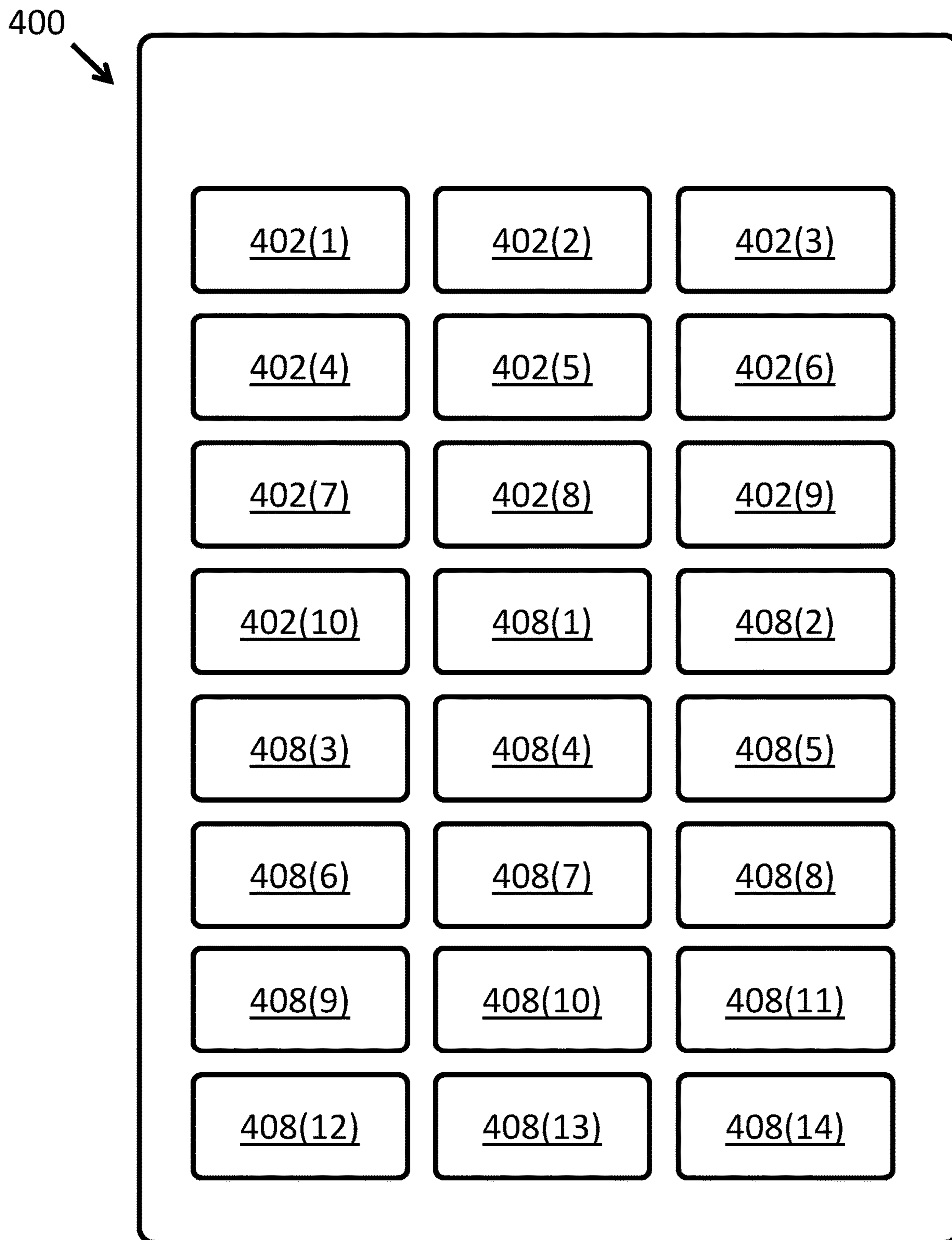


FIG. 4D

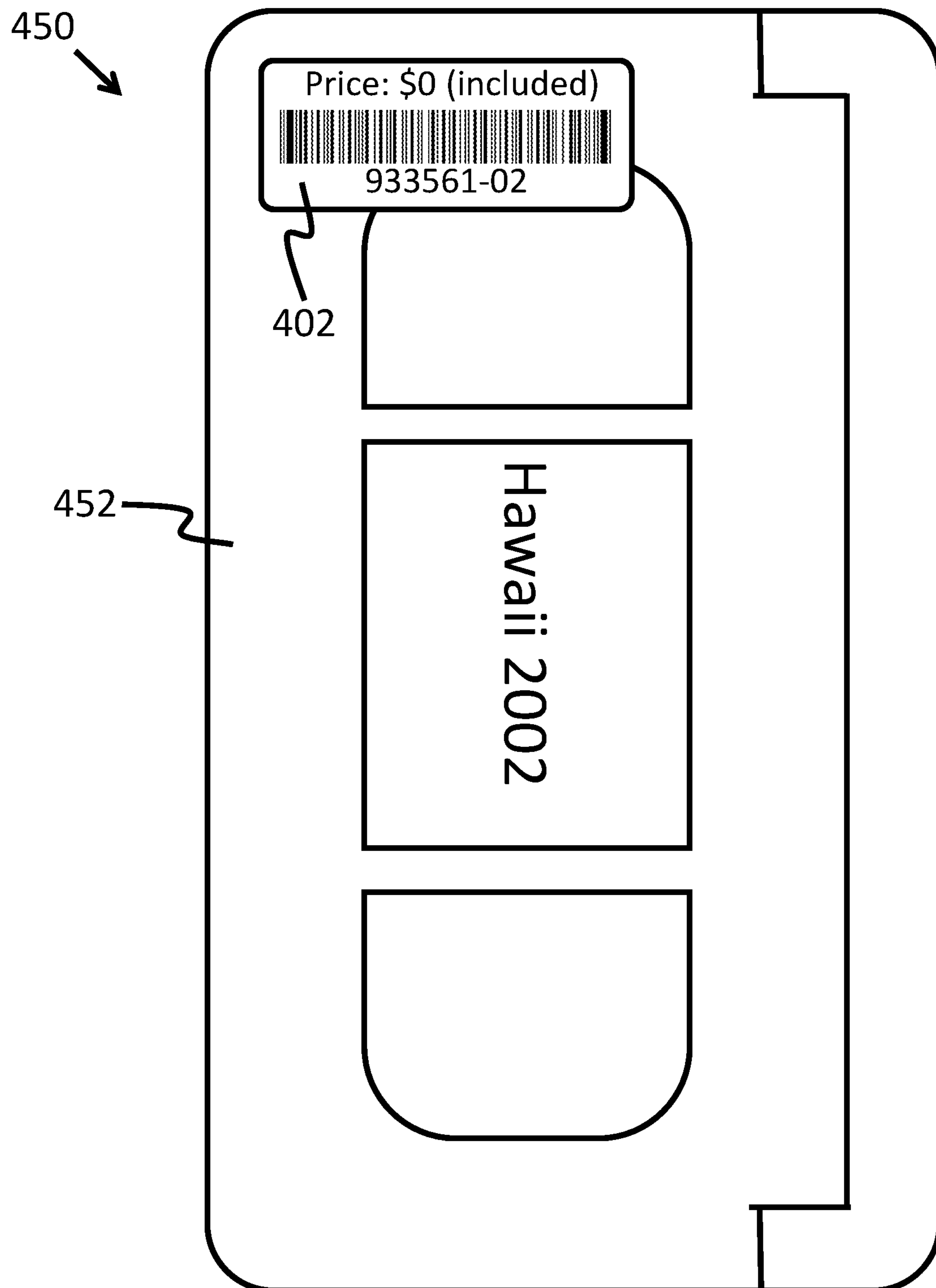


FIG. 4E

100

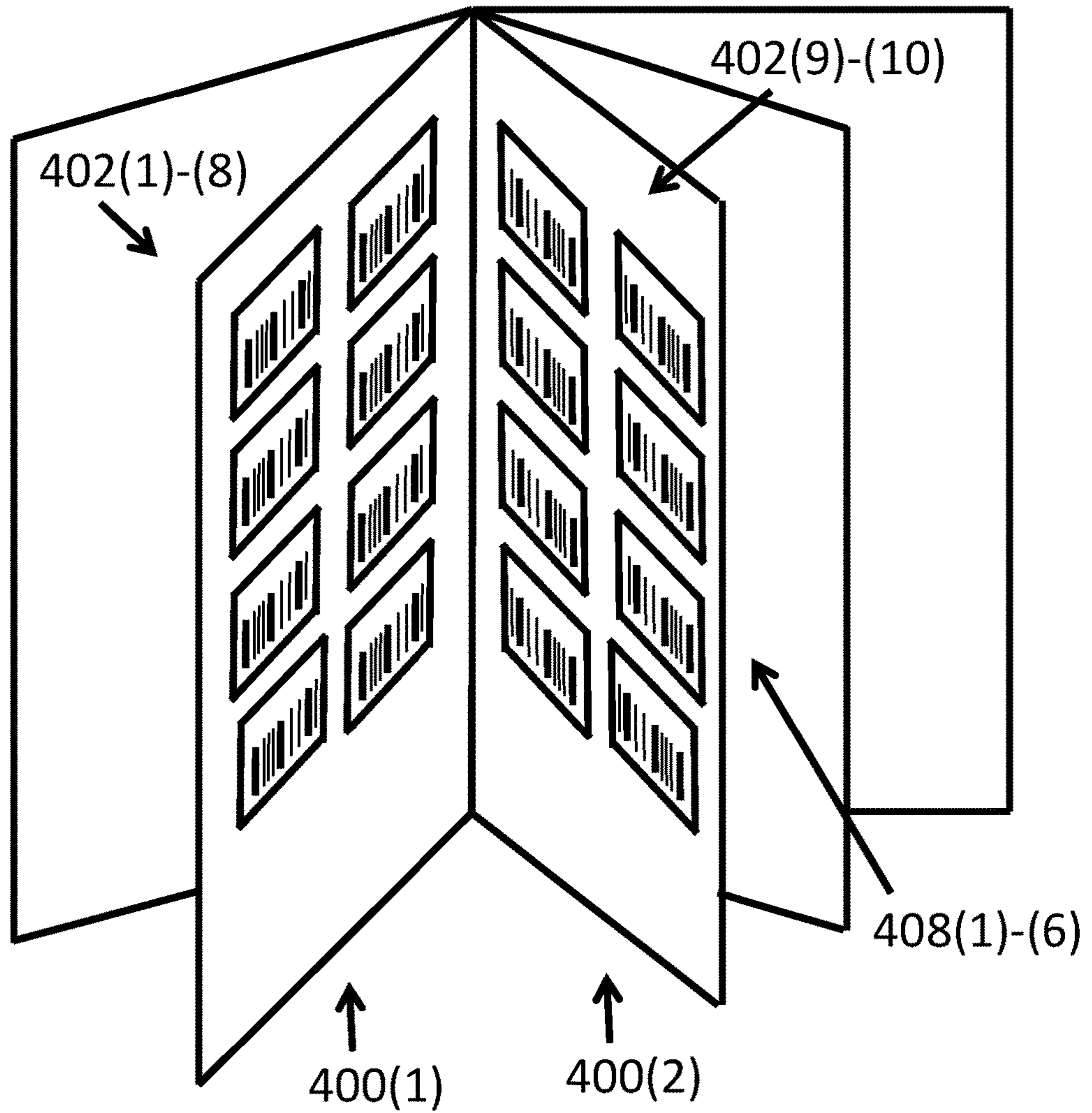


FIG. 4F

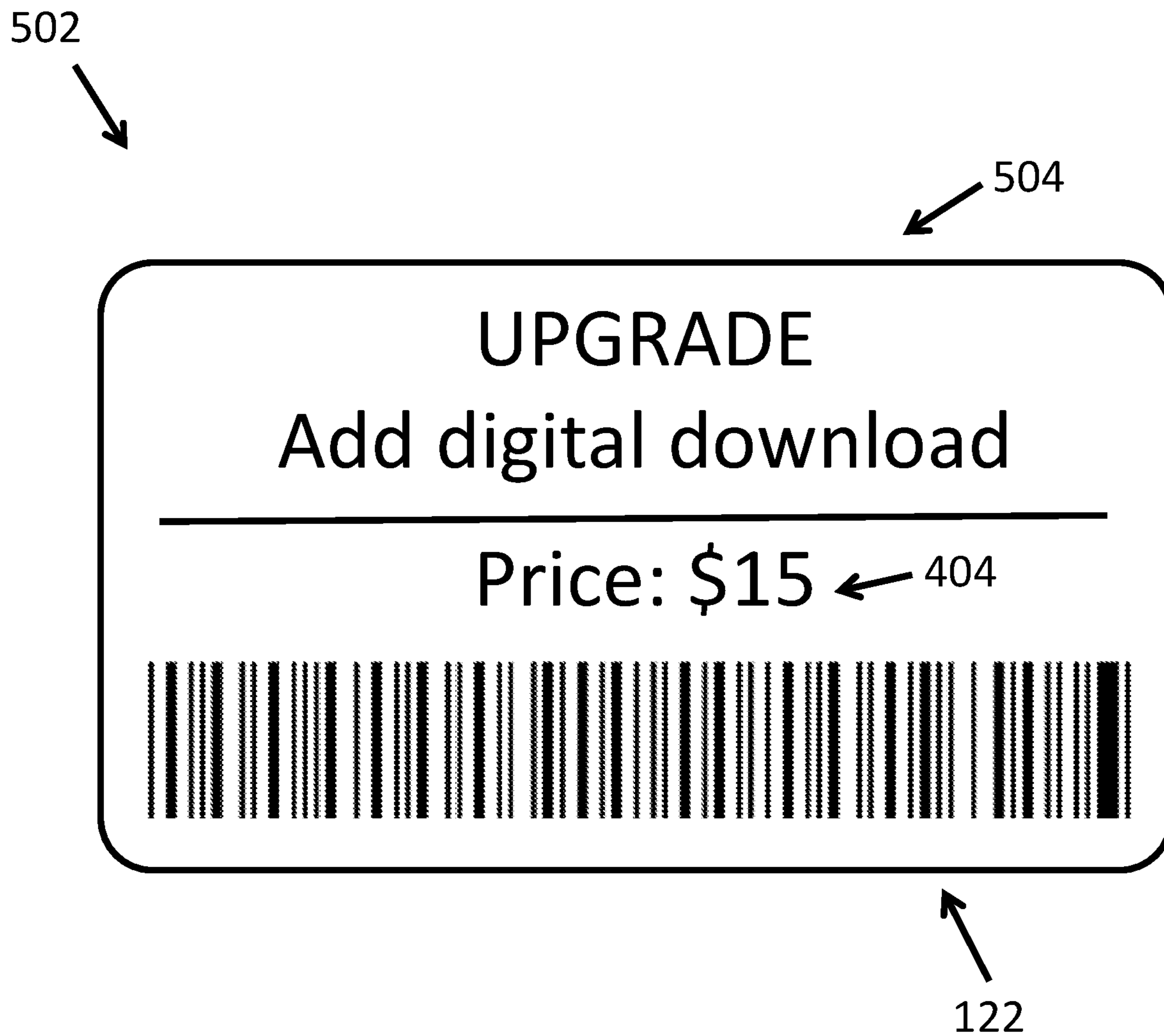


FIG. 5A

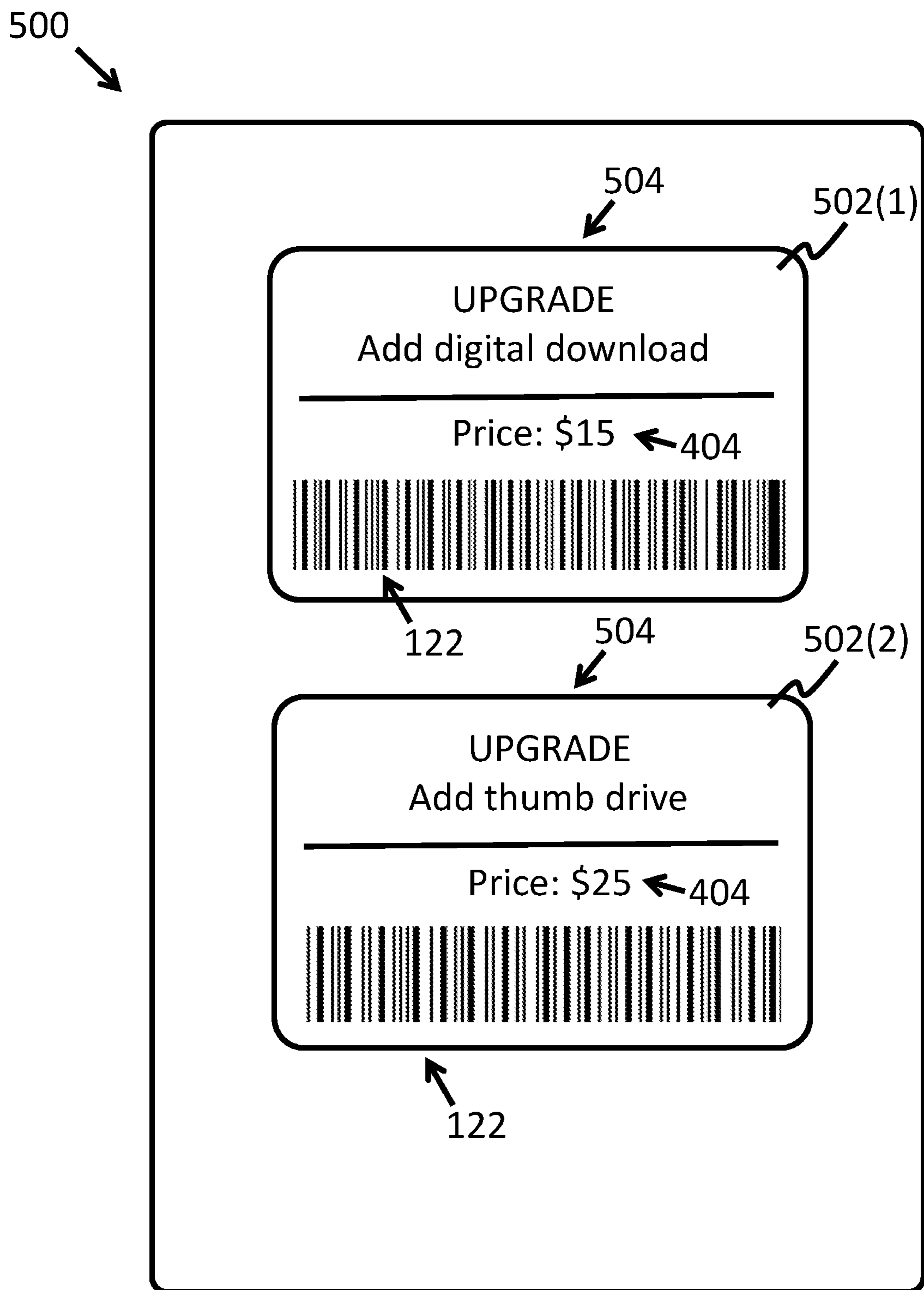


FIG. 5B

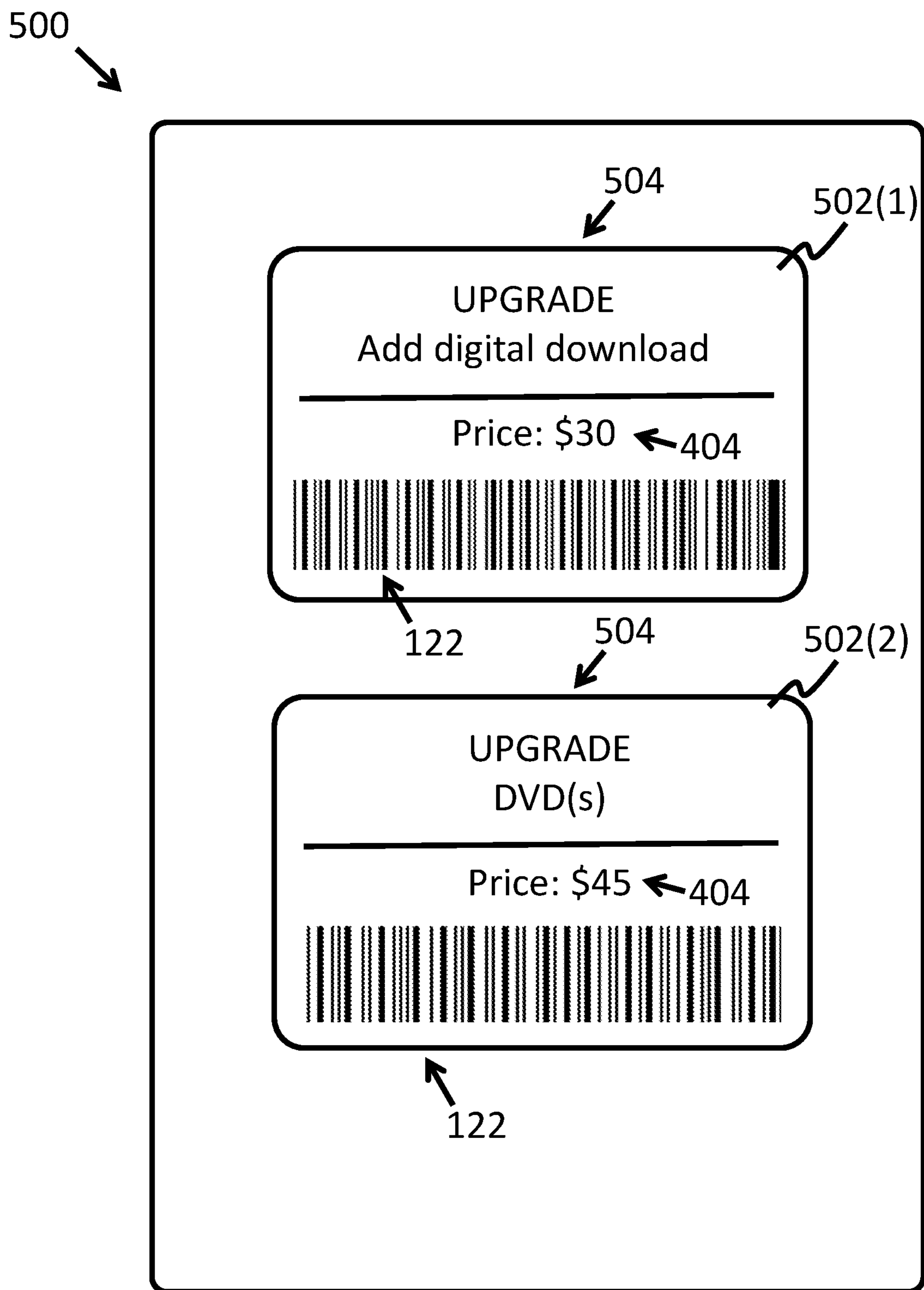


FIG. 5C

600



John Customer
101 Oak Tree St.
Smalltown, TN 34567

604



Order Processing
2300 Acorn Road
Smithville, TN 34655

602



Ground Shipping
Tracking No. 34561-88573-9328

122

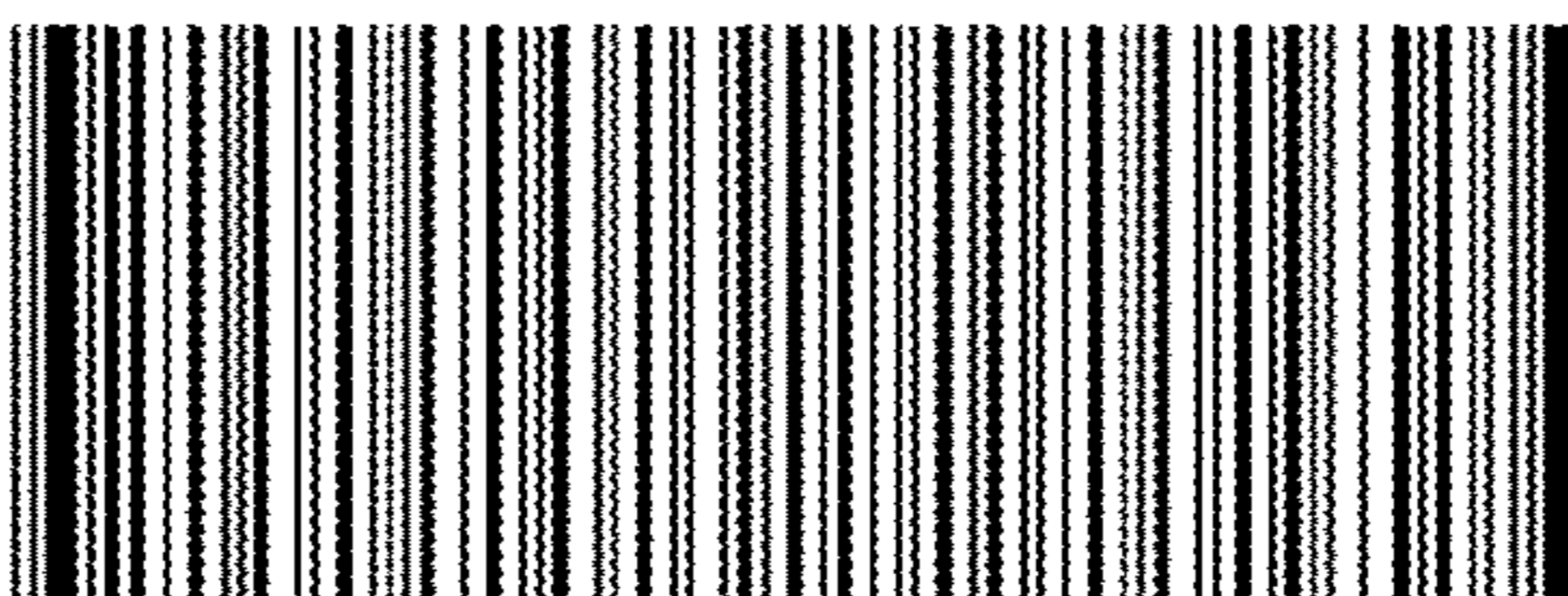


FIG. 6A

650
↓

The nearest shipping drop-off locations to you are:

450 Church Street
Suite 30
Smalltown, TN 34568

← 606(1)

4303 Green Hill Ave.
Smalltown, TN 34568
(drop off box located
around back)

← 606(2)

230 Main Street
Neighborville, TN 35411

← 606(3)

FIG. 6B

700



FIG. 7A

750



122

FIG. 7B

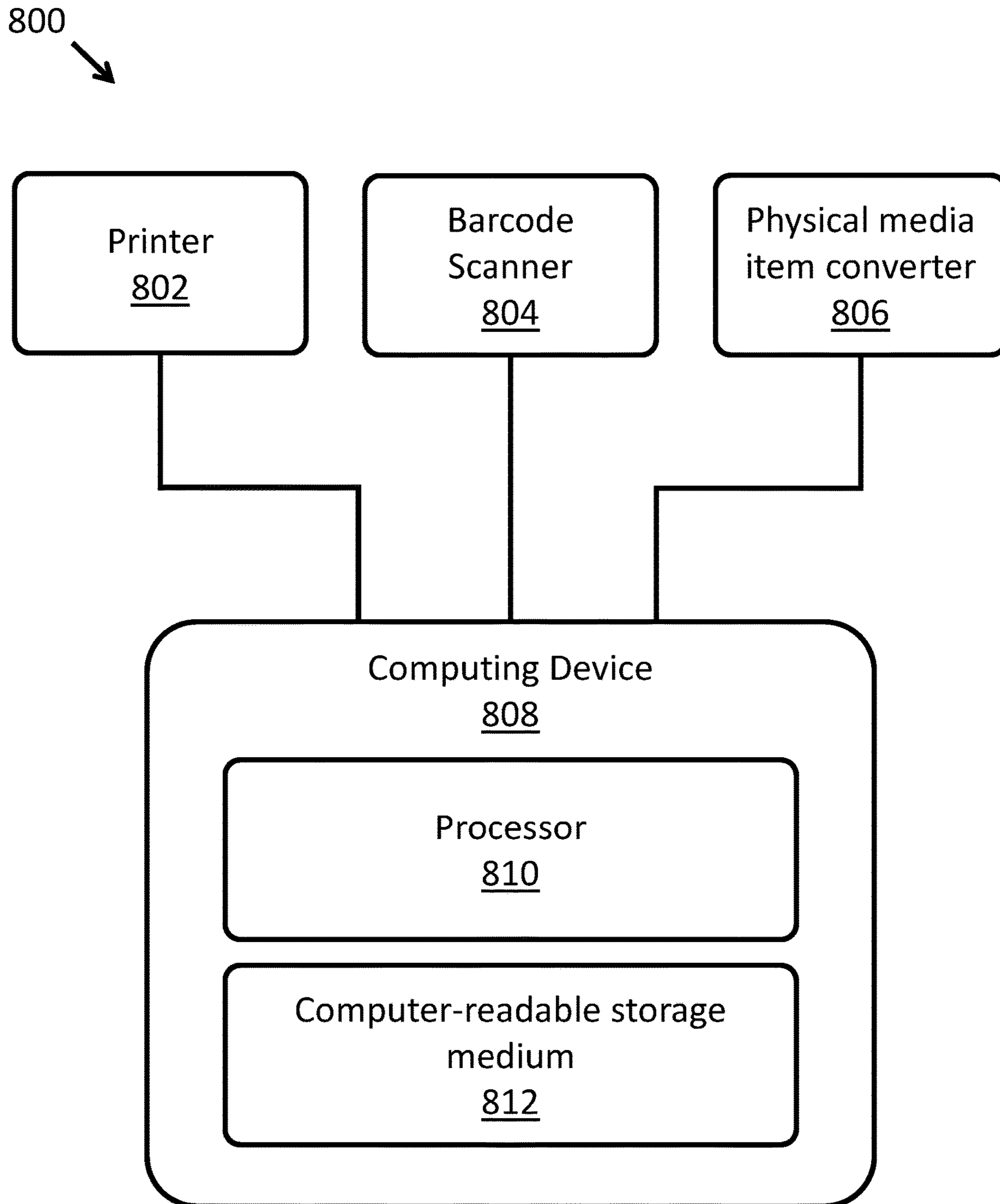


FIG. 8

900

•
•
•

904 906 908

	Order ID	Media ID	File ID
902(1)	933559	933559-01	933559-01.jpg
902(2)	933560	933560-01	933560-01.mp3
902(3)	933560	933560-02	933560-02.mp4
902(4)	933561	933561-01	
902(5)	933561	933561-02	
902(6)	933561	933561-03	
902(7)	933562	933562-01	
902(8)	933563	933563-01	

•
•
•

FIG. 9

1000
↓

906
↓

908
↓

Media ID	File ID
933563-01	933563-01.mp3
933563-02	933563-02.mp4
933563-03	933563-03.mp4
933563-04	933563-04.jpg
	933563-05.jpg
	933563-06.jpg
	933563-07.jpg
933563-05	933563-08.mp3
933563-06	933563-09.mp4

FIG. 10A

1000
↓

906
↓

908
↓

Media ID	File ID
933563-01	933563-01.mp3
933563-02	933563-02.mp4
933563-03	933563-03.mp4
933563-04	933563-04-01.jpg
	933563-04-02.jpg
	933563-04-03.jpg
	933563-04-04.jpg
933563-05	933563-05.mp3
933563-06	933563-06.mp4

FIG. 10B

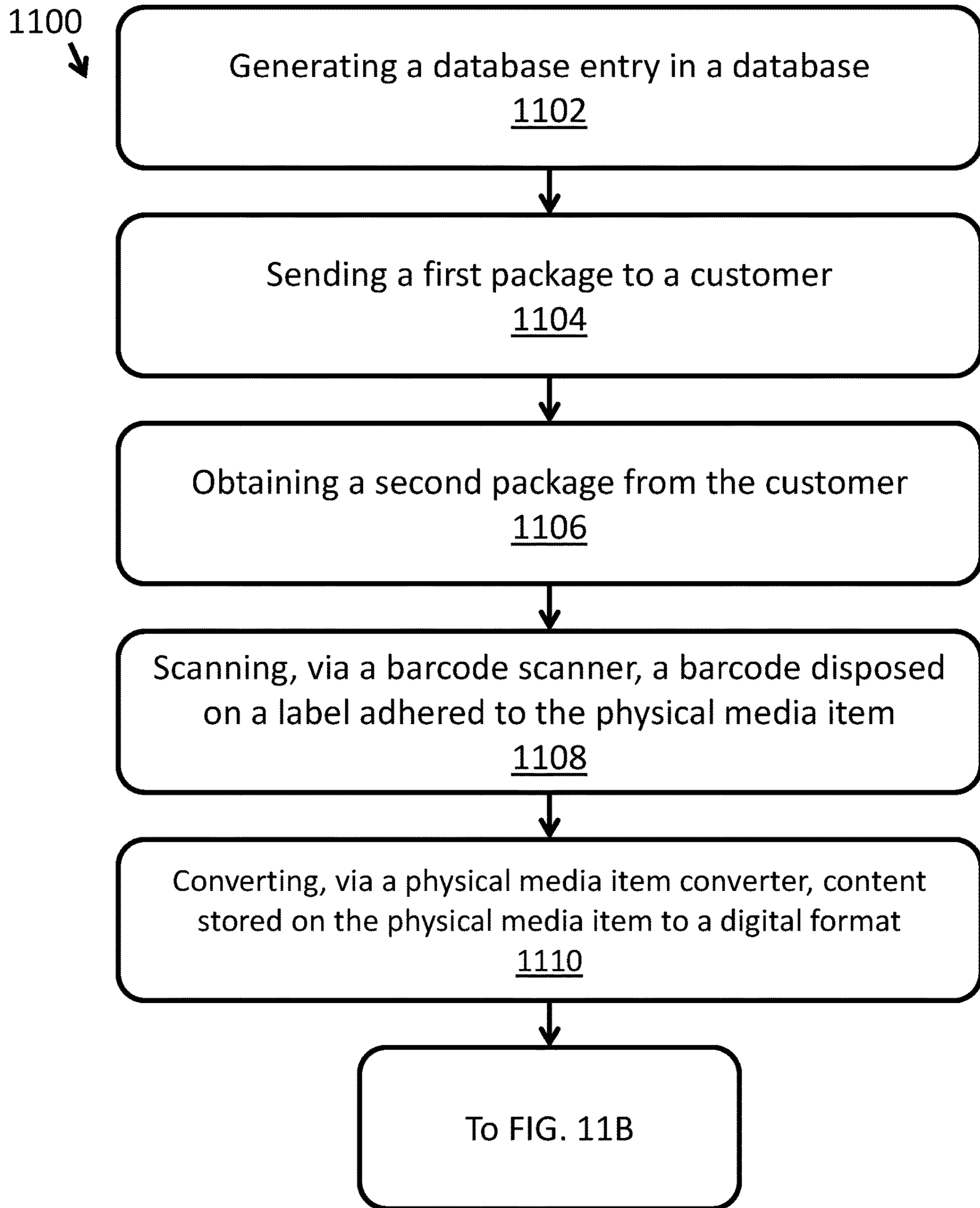


FIG. 11A

1100

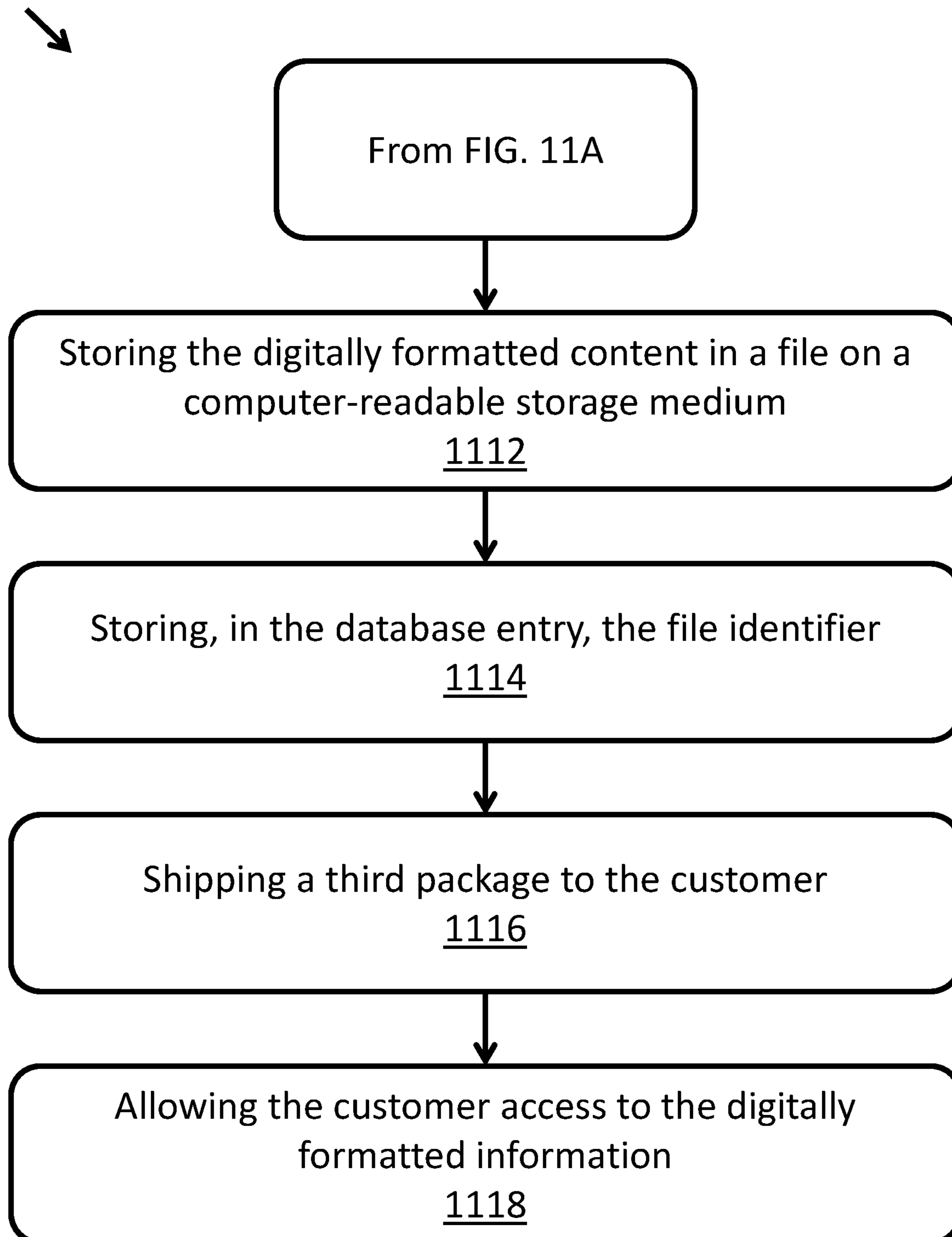


FIG. 11B

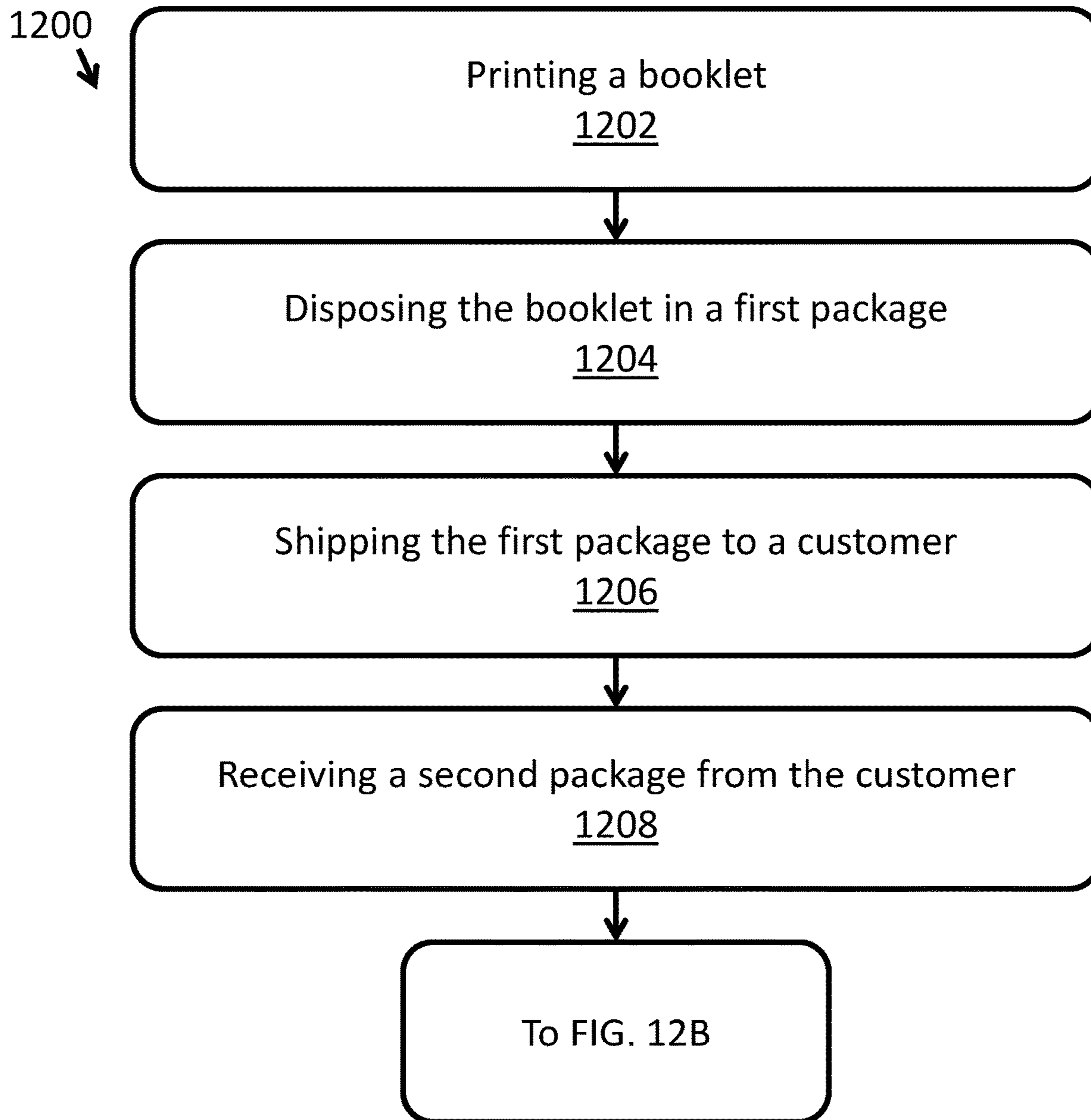


FIG. 12A

1200

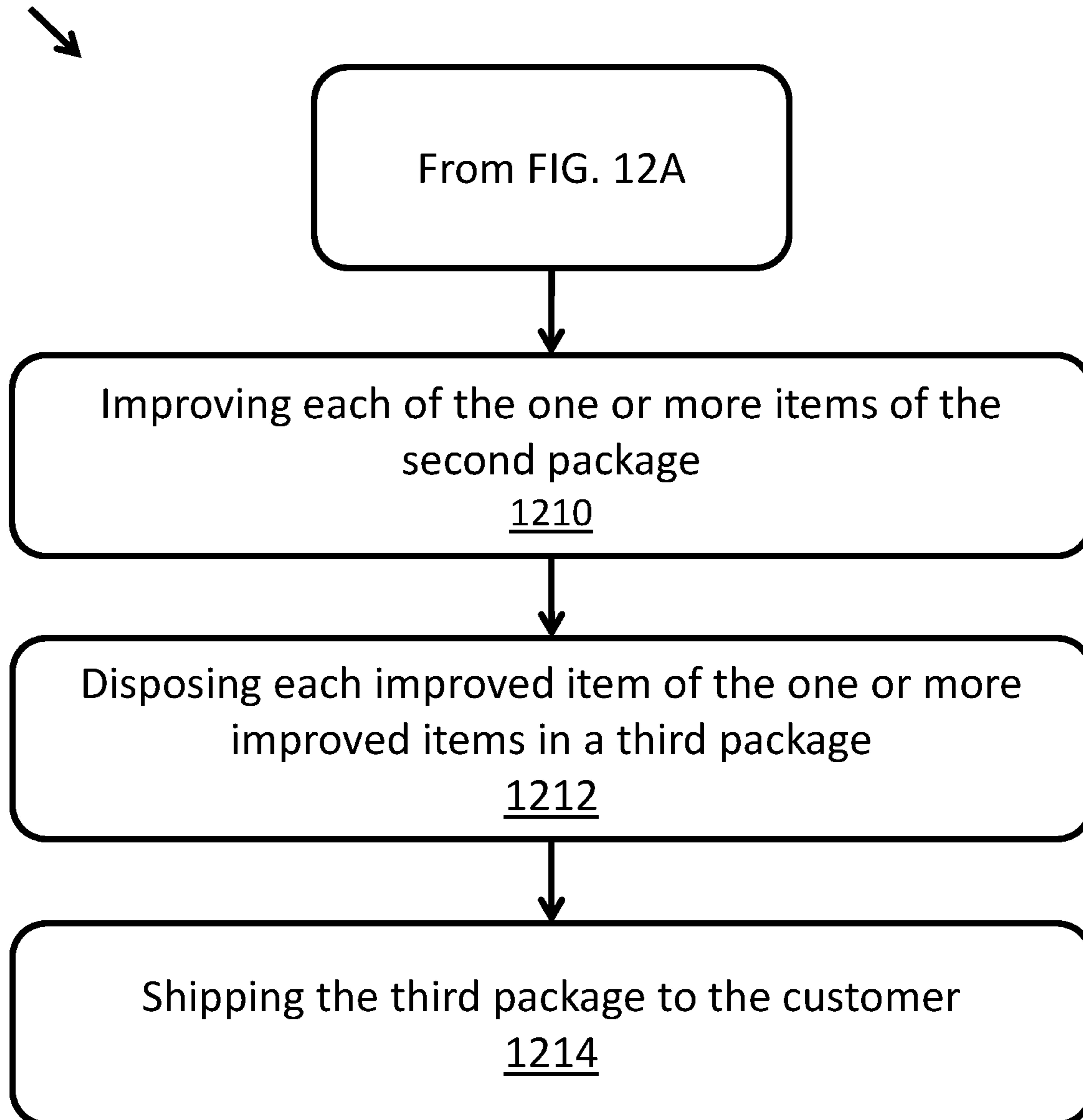


FIG. 12B

BARCODE BOOKLET

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CROSS-REFERENCES TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 16/849,611, filed Apr. 15, 2020, entitled "Barcode Booklet," which is pending, the entirety of which is incorporated by reference.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable

REFERENCE TO SEQUENCE LISTING OR COMPUTER PROGRAM LISTING APPENDIX

Not Applicable

BACKGROUND OF THE DISCLOSURE

The present disclosure generally relates to booklets, and more particularly to a barcode booklet.

Physical media items, such as photographic prints or videotape cassettes, deteriorate over time, causing the content stored on these items to be lost or at least reduced in quality. Digitizing the content stored by these physical media items is important for preserving the content. However, digitizing multiple items introduces its own problems and shortcomings, because items can be mixed up, accidentally digitized multiple times, or accidentally not digitized at all.

What is needed then are improvements related to barcode booklets.

BRIEF SUMMARY

This Brief Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

One aspect of the disclosure may include a booklet. The booklet may include a plurality of booklet pages. The plurality of booklet pages may include a multi-layer page. The multi-layer page may include a label. The label may include a front side and a back side. The back side may be disposed opposite the front side. The back side may include an adhesive. The multi-layer page may include a backing layer. The back side of the label may be selectively adhered to the backing layer with the adhesive. The booklet may include a single-layer page. The booklet may include a binding that joins the plurality of booklet pages. The booklet may include a plurality of barcodes. The multi-layer page may include a barcode page. A label of the barcode page may include a plurality of labels, and each label of the plurality of labels may include a barcode of the plurality of barcodes

disposed on the front side of the label. Each barcode of the plurality of barcodes may be unique among the plurality of barcodes.

Another aspect of the disclosure may include a system. The system may include a printer, a barcode scanner, or a physical media item converter. The system may include a computing device. The computing device may include a processor. The computing device may include a computer-readable storage medium. The computer readable storage medium may include a plurality of computer-executable instructions. The computer-executable instructions, when executed by the processor, may cause the processor to generate a plurality of barcodes, send the plurality of barcodes to the printer, receive, from the barcode scanner, a physical media item identifier corresponding to a barcode of the plurality of barcodes, receive, from the physical media item converter, the content stored on a physical media item, convert the received content to a digital format, store the digitally formatted content in a file on the computer-readable storage medium, or store, in a database entry of a database, the physical media item identifier and the file identifier.

Another aspect of the disclosure may include a method. The method may include a method of converting physical media to digital media. The method may include generating a database entry in a database. The database entry may include a physical media item identifier. The method may include obtaining a package from a customer. The package may include a physical media item. The method may include scanning, via a barcode scanner, a barcode disposed on a label adhered to the physical media item. The barcode may correspond to the physical media item identifier of the database entry. The method may include converting, via a physical media item converter, content stored on the physical media item to a digital format. The method may include storing the digitally formatted content in a computer-readable storage medium. The method may include storing, as a file identifier in the database entry, a file identifier corresponding to the digitally formatted content. The method may include shipping a second package to the customer. The second package may include the physical media item. The method may include allowing the customer access to the digitally formatted content.

Another aspect of the disclosure may include another method. The method may include a method of adding value to an item. The method may include printing a booklet. The booklet may include one or more labels. Each label of the one or more labels may include a barcode. The method may include disposing the booklet in a first package. The method may include shipping the first package to a customer. The method may include receiving a second package from the customer. The second package may include one or more items. Each item of the one or more items may include a label of the one or more labels of the first package disposed on the item. The method may include improving each of the one or more items of the second package. The method may include disposing each improved item of the one or more improved items in a third package. The method may include shipping the third package to the customer.

Numerous other objects, advantages and features of the present disclosure will be readily apparent to those of skill in the art upon a review of the following drawings and description of various embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a perspective view illustrating one embodiment of a booklet.

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FIG. 1B is a cutaway side view illustrating one embodiment of a multi-layer page of the booklet.

FIG. 2 is a front view illustrating one embodiment of a single-layer page of the booklet.

FIG. 3 is a front view illustrating another embodiment of a single-layer page.

FIG. 4A is a front view illustrating one embodiment of a physical media item label.

FIG. 4B is a front view illustrating one embodiment of a barcode page of the booklet.

FIG. 4C is a front view illustrating one embodiment of an upgrade physical media item label.

FIG. 4D is a front view illustrating another embodiment of the barcode page of the booklet.

FIG. 4E is a front view illustrating one embodiment of a physical media item with a physical media item label disposed thereon.

FIG. 4F is a perspective view illustrating one embodiment of a booklet with multiple barcode pages.

FIG. 5A is a front view illustrating one embodiment of a format upgrade label.

FIG. 5B is a front view illustrating one embodiment of an upgrade page of the booklet.

FIG. 5C is a front view illustrating another embodiment of the upgrade page of the booklet.

FIG. 6A is a front view illustrating one embodiment of a shipping page of the booklet.

FIG. 6B is a front view illustrating one embodiment of a shipping locations page of the booklet.

FIG. 7A is a front view illustrating one embodiment of a customer shipping page of the booklet.

FIG. 7B is a front view illustrating one embodiment of a shipping label-generating page of the booklet.

FIG. 8 is a schematic block diagram illustrating one embodiment of a system for converting physical media to digital media.

FIG. 9 is a schematic block diagram illustrating one embodiment of a portion of a database.

FIG. 10A is a schematic block diagram illustrating one embodiment of a physical media item-file index.

FIG. 10B is a schematic block diagram illustrating another embodiment of the physical media item-file index.

FIG. 11A is a flowchart diagram illustrating a portion of a method for converting physical media to digital media.

FIG. 11B is a flowchart diagram illustrating another portion of the method for converting physical media to digital media.

FIG. 12A is a flowchart diagram illustrating a portion of a method for improving an item.

FIG. 12B is a flowchart diagram illustrating another portion of the method for improving an item.

DETAILED DESCRIPTION

While the making and using of various embodiments of the present disclosure are discussed in detail below, it should be appreciated that the present disclosure provides many applicable inventive concepts that are embodied in a wide variety of specific contexts. The specific embodiments discussed herein are merely illustrative of specific ways to make and use the disclosure and do not delimit the scope of the disclosure. Those of ordinary skill in the art will recognize numerous equivalents to the specific apparatus and methods described herein. Such equivalents are considered to be within the scope of this disclosure and are covered by the claims.

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As used herein, the term “a” means “at least one” or “one or more.” Thus, “a label” may refer to a single label or to multiple labels. The term “or” means “and/or” unless explicitly stated otherwise.

As used herein, the term “barcode” includes the actual barcode itself (i.e., the pattern that can be read by an optical scanner). The term “barcode data” includes the data encoded by a corresponding barcode. Furthermore, the term “barcode” includes linear barcodes, matrix codes, two-dimensional barcodes (such as quick response (QR) codes), or other types of optical encoding codes that can be read by an optical scanner.

In the drawings, not all reference numbers are included in each drawing, for the sake of clarity. In addition, positional terms such as “upper,” “lower,” “side,” “top,” “bottom,” etc. refer to the apparatus when in the orientation shown in the drawing. A person of skill in the art will recognize that the apparatus can assume different orientations when in use.

In one embodiment, the disclosure relates to a booklet. The booklet may include a booklet related to digitizing and preserving content stored on physical media items, such as videocassettes, tape cassettes, or photographic prints. The booklet may include labels that can be removed from the booklet and selectably disposed on a physical media item. The label may include a barcode. The barcode may be scannable. The content of the physical media item can be read or scanned and converted into a digital format.

A customer may place a digitization order to digitize one or more physical media items. A computer system may receive the digitization order and cause the booklet to be printed based on the digitization order. The booklet may be sent in a package to the customer. The customer may dispose labels found in the booklet on his/her physical media items and ship the package with the labelled physical media items back. The computer system may use a barcode scanner to scan the barcodes of the labels and may use other equipment to digitize the content stored on the physical media items. The computer system may store the digitized content in a file on the computer system’s storage and associate the digitized content with an identifier corresponding to the scanned barcode. The file that includes the digitized content may be made accessible to the customer, for example, via downloadable link or by sending a storage disk (such as a compact disk (CD) or digital video disk (DVD)) or a thumb drive to the customer.

FIG. 1A depicts one embodiment of a booklet 100. The booklet 100 may include a plurality of booklet pages 102. For example, as depicted in FIG. 1A, the booklet 100 may include the booklet pages 102(1)-(5). In some embodiments, the booklet pages 102 may include a first multi-layer page 104. FIG. 1B depicts a cutaway side view of one embodiment of a multi-layer page 104. The multi-layer page 104 may include a label 106. The label 106 may include a front side 108. The label 106 may include a back side 110. The back side 110 may be disposed opposite the front side 108. The back side 110 may include an adhesive 112. The multi-layer page 104 may include a backing layer 114. The back side 110 of the label 106 may be selectably disposed on the backing layer 114. For example, the back side 110 of the label 106 may be selectably adhered to the backing layer 114 with the adhesive 114. In some embodiments, the multi-layer page 104 may include a surrounding layer 122. The surrounding layer 122 may be disposed on the backing layer 114. The surrounding layer 122 may not be removable from the backing layer 114. The surrounding layer 122 may surround at least a portion of the sides of the label 106 when viewing the front of the label 106.

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In some embodiments, a label **106** may be selectably removable from the backing layer **114**. The label **106** may be selectably adhereable to a physical media item. A physical media item may include an item capable of holding media content in an analog or digital format. Media content may include video content, audio content, image content, text content, or other content perceptible by a person. A physical media item may include a tape cassette. A tape cassette may include a video home system (VHS) videocassette, a VHS-compact (VHS-C) videocassette, a MiniDV videocassette, a high-band Video8 (Hi8) videocassette, an 8 mm videocassette, a Digital8 videocassette, a MicroMV videocassette, a Betamax videocassette, or some other type of videocassette. A tape cassette may include an analog magnetic tape or other type of audio tape cassette. A physical media item may include a film reel. A physical media item may include an image item (e.g., a photographic print, a film negative, a photographic slide) or a bundle that includes one or more image items. The bundle may include an envelope, a re-sealable zipper storage bag, a rubber band, or some other bundling apparatus. A physical media item may include a computer storage item. A computer storage item may include a CD, a DVD, a hard drive, or a disk insertable into a disk drive, such as a floppy disk or a Zip disk. In some embodiments, a physical media item may include a cell-phone, a camcorder, a voice recording device (such as a digital voice recorder), a personal digital assistant (PDA), a video game device (e.g., a portable gaming device or a video game console), or some other device. A physical media item may include a device with an internal or flash memory (such as a cellphone, voice recorder, or other type of device).

Returning to FIG. 1A, the plurality of booklet pages **102** may include a single-layer page **118**. The single-layer page **118** may include a single layer or a single sheet instead of multiple layers (e.g., the surrounding layer **116** and the label **106** as one layer, and the backing layer **114** as another layer). The booklet **100** may include a binding **120**. The binding **120** may join the plurality of booklet pages **102**. The booklet **100** may include a plurality of barcodes **122**. A first multi-layer page **104** may include a barcode page (for example, the barcode page **400** shown in FIG. 4B, below). The label **106** of the barcode page may include multiple labels **106** (for example, the labels **106(1)-(6)** shown in FIG. 1A). Each label **106** of the plurality of labels **106** may include a barcode **122** of the plurality of barcodes **122**. The barcode **122** may be disposed on the front side **108** of the label **106**. Each barcode **122** of the plurality of barcodes **122** may be unique among the multiple barcodes **122**.

In one embodiment, the booklet **100** may be included in a package. The package may be sent to a customer in response to the customer placing a digitization order. The customer may place the customer digitization order in response to wanting to have one or more of his/her physical media items digitized. The package may include a box and the booklet **100** disposed inside the box.

FIG. 2 depicts one embodiment of a single-layer page **118** of the booklet **100**. In one embodiment, a single-layer page **118** may be customized based on the customer or the customer digitization order. The single-layer page **118** may include printed information **202**. The printed information **202** may be customized to the customer or the customer digitization order. The printed information **202** may include printed text. For example, the printed information **202** may include the customer's name, which a computer system that caused the printing of the booklet **100** may have obtained from a database. The printed information **202** may include the physical media item types that the customer indicated in

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the customer digitization order that the customer would be sending in to be digitized. In some embodiments, the printed information **202** may be printed on a multi-layer page **104**.

FIG. 3 depicts an embodiment of another portion of the booklet **100**. In some embodiments, the plurality of booklet pages **102** may include a second single-layer page **118**. The second single-layer page **118** may include printed information **302**. The printed information **302** may include printed text that includes information about a type of physical media item. The printed information **302** may include text **304** describing the type of physical media item, how to apply a label **106** to the physical media item, or may include other information. The printed information **302** may include images **306** of the physical media item, an image of a label **106** disposed on a physical media item, or other images. In one embodiment, multiple single-layer pages **118** may each include printed information **302** about different types of physical media items.

FIG. 4A depicts one embodiment of a physical media item label **402**. In some embodiments, a label **106** may include a physical media item label **402**. The label may include price information **404**. The price information **404** may indicate how much the customer will be charged for converting the physical media item with that physical media item label **402** attached to it. The physical media item label **402** may include a barcode **122**. The physical media item label **402** may include identifier information **406**. The identifier information **406** may include the barcode data that corresponds to the barcode **122** of the physical media item label **402**. The identifier information **406** may include some other printed information that may identify the physical media item label **402** or the physical media item that the physical media item label **402** is disposed on. The identifier information **406** may uniquely identify the physical media item label **402**. In some embodiments, the physical media item label **402** may include physical media item information (not shown in FIG. 4A). The physical media item information may include text identifying the type of physical media item the physical media item label **402** may be disposed on (e.g., a film reel or a bundle of photographic prints).

FIG. 4B depicts one embodiment of a barcode page **400**. In one embodiment, a multi-layer page **104** may include the barcode page **400**. The barcode page **400** may include multiple labels **106**. Each label **106** of the multiple labels **106** may include a barcode **122** of the plurality of barcodes **122** disposed on the front side **108** of the label **106**. Each barcode **122** of the plurality of barcodes **122** may be unique among the plurality of barcodes **122**.

For example, the barcode page **400** shown in FIG. 4B may include 24 physical media item labels **402**. Each physical media item label **402** may include a barcode **122** of the plurality of barcodes **122** disposed on the front side **108** of the label **106**, and each barcode **122** of the plurality of barcodes **122** may be unique among the multiple barcodes **122**. In some embodiments, each barcode **122** may be unique among all barcodes produced by a computer system that generates or prints the barcodes. In some embodiments, the booklet **100** may include multiple barcode pages **400**. For example, the barcode **122** of the physical media item label **402(1)** may correspond to the barcode data "933561-01," the barcode **122** of the physical media item label **402(2)** may correspond to the barcode data "933561-02," the barcode **122** of the physical media item label **402(3)** may correspond to the barcode data "933561-03," etc. The identifier information **406** of each physical media item label **402** of the barcode page **400** may include the barcode data printed on the physical media item label **402**.

FIG. 4C depicts one embodiment of an upgrade physical media item label 408. A label 106 may include an upgrade physical media item label 408. The upgrade physical media item label 408 may include similar elements to the physical media item label 402 of FIG. 4A, such as a price information 404, a barcode 122, and identifier information 406. Like the physical media item label 402, the upgrade physical media item label 408 may be disposable on a physical media item. The booklet 100 may include one or more of these upgrade physical media item labels 408 in case the customer realizes that he/she has more physical media items that he/she wants to add to the digitization order without having to submit an additional digitization order.

FIG. 4D depicts another embodiment of the barcode page 400. As can be seen in FIG. 4D, the barcode page 400 may include one or more physical media item labels 402 and one or more upgrade physical media item labels 408. The number of physical media item labels 402 and upgrade physical media item labels 408 may be customized to the customer digitization order that corresponds to the booklet 100. For example, if a customer digitization order is for 10 items to be digitized, then the barcode page 400 may include 10 physical media item labels 402, and the remainder of the labels 106 on the barcode page 400 may include upgrade physical media item labels 408. In another example, if a customer digitization order is for 24 items to be digitized, then the barcode page 400 may include 24 physical media item labels 402 and no upgrade physical media item labels 408.

FIG. 4E depicts one embodiment of a system 450 for a physical media item. The system 450 may include a physical media item 452. For example, the physical media item 452 of FIG. 4E may include a videocassette. The system 450 may include a label 106. For example, as shown in FIG. 4E, the physical media item 452 may have a physical media item label 402 disposed on it. In this manner, the barcode 122 of the physical media item label 402 physical media item 452 can be scanned and the contents of the physical media item 452 can be associated with the barcode data of the scanned barcode 122 of the physical media item label 402, as explained below.

FIG. 4F depicts one embodiment of the booklet 100. The booklet 100 may include multiple barcode pages 400. For example, as depicted in FIG. 4F, the booklet may include a first barcode page 400(1) and a second barcode page 400(2). The first barcode page 400(1) may include a subset of the physical media item labels 402 or upgrade physical media item labels 408, and the second barcode page 400(2) may include another subset of the physical media item labels 402 or upgrade physical media item labels 408. For example, as shown in FIG. 4F, the first barcode page 400(1) may include the first 8 physical media item labels 402(1)-(8), and the second barcode page 400(2) may include the last two physical media item labels 402(9)-(10) and several upgrade physical media item labels 408(1)-(6).

In some embodiments, the number of barcode pages 400 the booklet 100 includes may be customized based on the customer digitization order data. For example, a booklet 100 generated and printed based on a customer digitization order where the order includes only 10 physical media items may include only one barcode page 400 (e.g., the barcode page 400 of either FIG. 4B or FIG. 4D). A booklet 100 generated and printed based on a larger customer digitization order (e.g., an order where the order includes 30 physical media items to be digitized) may include two barcode pages 400.

FIG. 5A depicts one embodiment of a format upgrade label 502. A label 106 may include a format upgrade label

502. A format upgrade label 502 may include upgrade information 504. The upgrade information 504 may include an explanation about how attaching the format upgrade label 502 may result in the customer receiving digitized content in a digital format other than the format requested in the customer's original customer digitization order. For example, as depicted in FIG. 5A, the upgrade information 504 may indicate that attaching the format upgrade label 502 may result in the customer receiving the digitized content of his/her customer digitization order via digital download. The format upgrade label 502 may include price information 404. The format upgrade label 502 may include a barcode 122. In one embodiment, the barcode data corresponding to the barcode 122 may indicate the upgraded format (e.g., DVD, thumb drive, digital download). In some embodiments, the format upgrade label 502 may be attached to a physical media item, and only the digitized content corresponding to that physical media item may receive the format upgrade. In other embodiments, attaching the format upgrade label 502 to a physical media item may result in all of the physical media items receiving the format upgrade.

FIG. 5B depicts one embodiment of an upgrade page 500. In some embodiments, a multi-layer page 104 may include the upgrade page 500. The upgrade page 500 may include elements that may be similar to the barcode page 400. For example, the upgrade page 500 may include one or more labels 106 of the plurality of labels 106. Each label 106 of the plurality of labels 106 of the upgrade page 500 may include a barcode 122 of the plurality of barcodes 122. The barcode 122 may be disposed on the front side 108 of the label 122. A label 106 of the upgrade page 500 may include a format upgrade label 502. The format upgrade label 502 may include the upgrade information 504, the price information 404, and the barcode 122.

In some embodiments, the upgrade information 504 of the format upgrade labels 502 of the upgrade page 500 may be customized based on the customer digitization order. For example, if the customer digitization order includes that the order is to be delivered in a DVD format, then the upgrade page 500 may not include a format upgrade label 502 that corresponds to a DVD format. Instead, as is depicted in FIG. 5B, the upgrade page 500 may include a format upgrade label 502(1) corresponding to a digital download and a format upgrade label 502(2) corresponding to a thumb drive.

In one embodiment, the price information 404 of the format upgrade label 502 may be customized based on the number of physical media items of the customer digitization order. In some embodiments, the larger the number of physical media items in the customer digitization order, the higher the price. For example, as depicted in FIG. 5C, the price information 404 of the format upgrade label 502(1) may include a higher price than the price information 404 of the format upgrade label 502(1) depicted in FIG. 5B because the upgrade page 500 of FIG. 5C may be part of a booklet 100 that corresponds to a customer digitization order with more physical media items.

FIG. 6A depicts one embodiment of a shipping page 600. A multi-layer page 104 of the plurality of booklet pages 102 of the booklet 100 may include the shipping page 600. The shipping page 600 may include a label 106. The label 106 of the shipping page 600 may include a printed shipping label. The printed shipping label may include shipping information such as a destination address 602, a return address 604, one or more barcodes 122 (e.g., as depicted in FIG. 6A, a linear barcode and a QR code), or other printed information. The destination address 602 may include the address of a

location where the customer's physical media items are digitized. The return address **604** may include the customer's address.

FIG. **6B** depicts one embodiment of a shipping locations page **650**. A single-layer page **118** may include the shipping locations page **650**. The shipping locations page **650** may be disposed next to the shipping page **600** in the booklet **100**. The shipping locations page **650** may include drop off location information **606**. The drop off location information may include information about a location where a customer can drop off a package. The package may include a box with the customer's physical media items inside, each physical media item having one or more labels **106** disposed on it. The package may have the printed shipping label from the shipping page **600** disposed on the package.

In some embodiments, the drop off location information **606** may include an address. The address may be an address of a government post office, an address of a store of a package delivery company, an address where a drop off box for a government postal service or a package delivery company is located, or some other drop off location. The drop off location information **606** may include instructions on locating the office, store, or drop off box.

The shipping locations page **650** may include information about multiple drop off locations. The locations may be customized based on the customer digitization order. For example, the customer digitization order may include data that includes the address of the customer. The drop off locations may be selected and included on the shipping locations page **650** based on proximity to the customer's address. For example, the shipping locations page **650** may include the addresses of the three closest drop off locations to the customer's address.

FIG. **7A** depicts one embodiment of a customer shipping page **700**. A multi-layer page **104** of the plurality of booklet pages **102** of the booklet **100** may include the customer shipping page **700**. The customer shipping page **700** may include a label **106**. The label **106** of the customer shipping page **700** may include a printed shipping label. The printed shipping label may include shipping information such as a destination address **602**, a return address **604**, one or more barcodes **122**, or other printed information. The destination address **602** may include the customer's address. The return address **604** may include the address of the location where the customer's physical media items were digitized.

FIG. **7B** depicts one embodiment of a shipping label-generating page **750**. The back cover of the booklet **100** may include the shipping label-generating page **750**, or a final page of the booklet (which may be a single-layer page **118**) or another page of the booklet may include the shipping label-generating page **750**. The shipping label-generating page **750** may include a barcode **122**. For example, the barcode **122** may include a QR code. A computer system may read the barcode **122** (e.g., via a barcode scanner) and may generate a shipping label based on the barcode **122**. The shipping label may include the address of the customer whose customer digitization order caused the generation and printing of the booklet **100**. The shipping label **100** may be disposed on a box, the booklet **100** may be disposed inside the box, and the box with the booklet **100** inside may form the first package and be sent to the customer.

In one embodiment, the booklet **100** may include a cover. The cover may include a sheet of material disposed around the other pages of the booklet **100**. The cover may include a material different than that multi-layer pages **104** or the single-layer pages **118**. The material of the cover may be thicker than the other pages of the booklet **100**. The cover

may be pre-printed (e.g., the cover may not be customized based on a customer digitization order). The cover may provide a cover for the booklet **100** that may have a more aesthetically pleasing look or feel than the other pages of the booklet **100**.

In some embodiments, the binding **114** of the booklet **100** may include one or more fasteners. A fastener may include a staple, spiral binding, one or more rings, or other types of fasteners. In other embodiments, the binding **114** may include an adhesive, a threading, or other types of binding.

FIG. **8** depicts one embodiment of a system **800**. The system **800** may include a system for converting physical media to digital media. In other words the system **800** may include a system for converting the content stored on a physical media item to a digital format. The system **800** may include a printer **802**. The system **800** may include a barcode scanner **804**. The system **800** may include a physical media item converter **806**. The system **800** may include a computing device **808**.

In some embodiments, the computing device **808** may include a processor **810**. The computing device **808** may include a computer-readable storage medium **812**. The computer-readable storage medium **812** may include one or more computer-executable instructions. The computer-executable instructions, when executed by the processor **810**, may cause the processor **810** to perform one or more functions. These functions may include generating a plurality of barcodes **122** and sending the plurality of barcodes **122** to the printer **802**. The functions may include receiving, from the barcode scanner **804**, a physical media item identifier. The physical media item identifier may correspond to a barcode **122** of the plurality of barcodes **122**. The functions may include receiving, from the physical media item converter **806**, the content stored on a physical media item, converting the received content to a digital format, and storing the digitally formatted content in a file on the computer-readable storage medium **812**. The file stored on the computer may include a file identifier. The functions may include storing, in a database entry of a database, the physical media item identifier and the file identifier.

In one embodiment, the printer **802** may include a peripheral computer hardware device operable to print on sheets of paper or on other print media. The printer **802** may include a personal printer, an industrial printer, a laser printer, an inkjet printer, or some other type of printer. The printer **802** may be operable to print information on sheets that form the plurality of booklet pages **102** of the booklet **100**. The printer **802** may print the printed information **202** customized to the customer or customer digitization order or the printed information **302** about types of physical media items. The printer **802** may print the plurality of labels **106** of the barcode page **400**, the upgrade page **500**, the shipping page **600**, or the customer shipping page **700**. In some embodiments, some of the printed information **202**, **302**, or a portion of the information printed on the labels **106** may be pre-printed on the plurality of booklet pages **102**, and the printer **802** may print other information on the plurality of booklet pages **102**.

The printer **802** may receive data from the computing device **808** and print the plurality of booklet pages **102** based on the received data. The received data may include the specific content of the labels **106**, the number of booklet pages **102**, the order of the booklet pages **102**, or other data. In this manner, the printer **802** is operable to print the booklet **100** customized for the customer's specific digitization order.

In some embodiments, the barcode scanner **804** may include an optical scanner operable to read barcodes and

send information based on the scanned barcode to the computing device **808**. The barcode scanner **804** may include a laser scanner, light-emitting diode (LED) scanner, a camera-based barcode reader, or another type of barcode scanner. The barcode scanner **804** may read a barcode **122** from a label **106** and send information corresponding to the scanned barcode to the computing device **808**.

The physical media item converter **806** may include a device operable to read the content stored on a physical media item and convert the content into an electronic or digital format. The electronic format may include a plurality of signals. The plurality of signals may include the content of the physical media item in a digital format, or the physical media item converter **806** may send the electronic signals to the computing device **808**, and the computing device **808** may be operable to convert the plurality of signals into the digital format.

In one embodiment, the physical media item converter **806** may include an image scanner. The image scanner may include a flatbed scanner. The image scanner may be operable to optically scan an image item (e.g., a photographic print or a film negative) and generate the plurality of signals based on the image item. The image scanner may be operable to convert the electrical signals into a digital format (e.g., a JPEG file) or may be operable to send the electrical signals to the computing device **808**, and the computing device **808** may be operable to convert the electronic signals into the digital format (e.g., via software executing on the computing device **808**).

In some embodiments, the physical media item converter **806** may include a videocassette recorder. The videocassette recorder may be operable to read the content stored on a videocassette and generate a plurality of electronic signals based on the read content. The videocassette recorder may include an output interface. The videocassette recorder may send the plurality of electrical signals to the output interface, and the output interface may send the plurality of signals to the computing device **808**, e.g., via one or more audio/video cables connecting the videocassette recorder and the computing device **808**. The computing device **808** may be operable to convert the electronic signals into a digital format (e.g. a Motion Picture Experts Group (MPEG) file or a MOV file). In some embodiments, the videocassette recorder may convert the electronic signals to the digital format, or the computing device **808** may be operable to perform the conversion.

In one or more embodiments, the physical media item converter **806** may include a film-to-video converter. The film-to-video converter may be operable to read the content stored on a film reel and generate a plurality of electronic signals based on the read content. The film-to-video converter may convert the electronic signals to a computer file (e.g., an MPEG file) or may propagate the electronic signals to the computing device **808** via an output interface of the film-to-video and one or more audio/visual cables, and the computing device **808** may be operable to perform the digital conversion.

In some embodiments, the physical media item converter **806** may include a tape cassette player. The tape cassette player may be operable to read content stored on an audio tape and generate a plurality of electronic signals based on the on the read content. The tape cassette player may be operable to convert the electronic signals into a digital format (e.g., an MP3 file), or the tape cassette may include an output interface, and the tape cassette player may send the plurality of electronic signals to the output interface. The output interface may send the plurality of electronic signals

to the computing device **808** via one or more audio/visual cables, and the computing device **808** may be operable to perform the digital conversion.

In some embodiments, the physical media item converter **806** may include a computing device (such as the computing device **808**). The computing device may be operable to read content stored on a device, such as a cellphone, camcorder, PDA or other type of device. The computing device may connect to the device via a cable (e.g., a universal serial bus (USB) cable or some other type of cable) in order to read or extract the content from the device. The content stored on the device may be in a digital format. The digital format may include a file format that may be uncommon, proprietary, or used in a foreign country. The computing device may be operable to extract the stored content from the device and store it on the computing device or a computer-readable storage in data connection with the computing device. The computing device may convert the extracted content and store the converted content in a more widely used digital format. In some embodiments, the content stored on the device may include recorded video, audio, or images. The content stored on the device may include text content, such as text messages, emails, text documents, notes, or other text content.

In one embodiment, the computing device **808** may include a desktop computer, a laptop computer, or a tablet computer. The computing device **808** may include an application server, a database server, or some other type of server. The computing device **808** may be in data or electronic communication with other devices—such as the printer **802**, the barcode scanner **804**, the physical media item converter **806**, or another computing device—over a data network, such as a local area network or the Internet. The processor **810** may include a central processing unit (CPU), graphical processing unit (GPU), or some other type of processor. The processor **810** may include a single core or multiple cores. The computer-readable storage medium **812** may include non-volatile storage, such as a hard drive, or volatile storage, such as random access memory. Other examples and details of computing devices **808** and various components thereof are provided below.

In one embodiment, the one or more computer-executable instructions may include software executable by the computing device **808**. The software may include one or more computer programs executable on the computing device **808**. In some embodiments, portions of the software may execute on a device in data communication with the computing device **808**.

In one embodiment, the software may be operable to receive a digitization order from the customer. The customer may access a webpage using a browser. The customer may enter information into the webpage based on the customer's desired order. For example, the customer may enter his/her name, address, and financial information. The customer may enter how many and what types of physical media items the customer wants digitized. The customer may enter whether he/she would like to receive the digitized content as a DVD, thumb drive, digital download, or another format. The customer may submit the digitization order to the computing device **808** from the webpage.

FIG. 9 depicts one embodiment of a portion of a database **900** for digitization orders. The database **900** may be stored on the computing device **808** or on a computing device separate from the computing device **808** but in data communication with the computing device **808**. The database **900** may include one or more database entries **902**. A database entry **902** may include one or more identifiers. An

identifier may include a string of text. An identifier may help identify information with the database entry **902**.

In one embodiment, a database entry **902** may include a customer order identifier **904** (abbreviated “Order ID” in FIG. **9**). The customer order identifier **904** may include an identifier that corresponds to a customer’s digitization order. In some embodiments, the customer order identifier **904** may match the order number of the customer’s digitization order. Multiple database entries **902** that correspond to the same customer digitization order may include the same customer order identifier **904**. For example, as can be seen in FIG. **9**, the database entries **902(2)-(3)** correspond to customer digitization order “933560,” and database entries **902(4)-(6)** correspond to customer digitization order “933561.”

A database entry **902** may include a physical media item identifier **906** (abbreviated “Media ID” in FIG. **9**). The physical media item identifier **906** may include an identifier that corresponds to a physical media item. In some embodiments, the physical media item identifier **906** may include the barcode data of a barcode **122**. For example, as seen in FIG. **9**, the database entries **902(4)** includes a physical media item identifier **906** that matches the barcode data of the barcode **122** of the physical media item labels **402** of FIG. **4A**. The physical media item identifier **906** may be formatted to be the customer digitization order number, followed by a dash, followed by a number that sequentially increased for each database entry **902**, as can be seen in FIG. **9** at database entries **902(4)-(6)**.

In some embodiments, the physical media item identifier **906** may include an identifier other than barcode data, and a separate column in the database **900** may include the barcode data such that the physical media item identifier **906** corresponds to the barcode data for a certain database entry **902**.

A database entry **902** may include a file identifier **908** (abbreviated “File ID” in FIG. **9**). The file identifier **908** may include data that identifies a file, folder, or other data (herein generally referred to as a “file”) that identifies the digitized content that corresponds to the database entry **902**. The file identifier **908** may uniquely identify the file. For example, as shown in FIG. **9**, the file identifier **908** may include the media item identifier **904** with the file format of the corresponding file appended. In some embodiments, the file identifier **908** may include a path to the file on the file system of the computing device **808**.

In one or more embodiments, the computing device **808** generating a database entry **902** may include the computing device **902** generating the row in the database **900** for the database entry **902**. Generating the database entry **902** may include including data in one or more fields of the database entry **902**. Some of the fields of a database entry **902** may be blank or otherwise not have data, as can be seen in FIG. **9**. For example, the file identifier **908** of the row **902(4)** is blank.

In one embodiment, the computing device **808** may receive the customer’s digitization order. The computing device **808** may generate one or more database entries **902** in the database **900** corresponding to the customer’s digitization order. In some embodiments, the computing device **808** may generate one database entry **902** for each physical media item in the customer’s order. For example, as shown in FIG. **9**, if the customer’s digitization order indicates that the customer has three physical media items to be converted, then the computing device **808** may generate three database entries **902(4)-(6)**. Generating a database entry **902** may

include including, in the database entry **902**, a customer order identifier **904** in the corresponding field of the database entry **902**.

In some embodiments, the computing device **808** may be operable to generate the plurality of barcodes **122**. Each barcode **122** may be unique among all barcodes stored in the database **900**. In some embodiments, the computing device **808** may store the barcode data of the plurality of generated barcodes **122** in the physical media item identifier **906** fields of the corresponding database entries **902**. For example, as shown in FIG. **9**, the computing device **808** may generate the barcode data “933561-01,” “933561-02,” and “933561-03” for the database entries **902(4)-(6)** that correspond to the customer order with the customer order identifier “933561.”

The computing device **808** may be operable to send the plurality of barcodes **122** to the printer **802**. This may include the computing device **808** reading one or more physical media identifiers **906** from the database **900** where the database entries **906** include the same customer order identifier **902**. For example, the computing device **808** may read the database to retrieve the database entries **902** that correspond to the customer digitization order 00345 (i.e., the database entries **902(4)-(6)**). The computing device **808** may read the physical media identifiers **906** from these database entries **902(4)-(6)** and send them to the printer **802**. The printer **802** may print the booklet **100**, and the booklet **100** may include the plurality of barcodes **122** on the barcode page **400**, as is depicted in FIG. **4B**. The booklet **100** may include the other pages and information discussed above.

In one embodiment, the booklet **100** may be sent to the customer. The printer **802** may print a shipping label with the customer’s address (which the computing device **808** may have retrieved from the customer digitization order data submitted by the customer) and may be adhered to a box. The booklet **100** may be disposed inside the box so that the box and inserted booklet **100** form a package. The package may be sent to the customer.

The customer may receive the package, remove one or more labels **106** from the barcode page **400** of the booklet **100**, and dispose the labels **106** on one or more of the customer’s physical media items. The customer may dispose labels **106** from the upgrade page **500** on other physical media items. The customer may remove the label **106** from the shipping page **600** and dispose it on a box (either the box the booklet **100** was sent in or a different box). The customer may dispose the labeled physical media items inside the box along with the booklet **100**. The customer may ship the box to the location indicated by the destination address **602** to be processed.

The barcode scanner **804** may scan a barcode **122** that is disposed on a physical media item from the package sent by the customer. The computing device **808** may be operable to receive, from the barcode scanner **804**, a physical media item identifier **906**. The physical media item identifier **906** may include the barcode data corresponding to the barcode **122** scanned by the barcode scanner **804**. The computing device **808** may determine whether the received physical media item identifier **906** is stored within the database **900**.

The computing device **808** may be operable to receive, from the physical media item converter **806**, the content stored on a physical media item. The physical media item may include a physical media item from the box sent by the customer and that has a label **106** with a barcode **122** disposed on the physical media item. The computing device **808** may receive the content as the plurality of electronic signals and convert the received content to a digital format. In some embodiments, the computing device **808** may

receive the content as digital content (e.g., as a file) because the physical media item converter **806** may have performed the digital conversion.

The computing device **808** may be operable to store the digitally formatted content in a file on the computer-readable storage medium **812**. The computing device **808** may store the file in a file system of the computing device **812** or in some other storage system. In some embodiments, the computing device **808** may store the file on a separate computing device that is in data communication with the computing device **808**. The file may include a file identifier **908**.

In one embodiment, the file may include the digitized content of a single physical media item. For example, the physical media item may include a videocassette, and the file generated based on that videocassette may include an MPEG file. In some embodiments, the file may include the digitized content of multiple physical media items. For example, the physical media items may include multiple photographic prints, and the file generated based on those photographic prints may include a ZIP folder (or other archive file) that includes multiple JPEG files, and the computing device **808** may have generated each JPEG file based on one of the multiple photographic prints.

In some embodiments, the computing device **808** may be operable to store, in a database entry **902** of a database **900**, the physical media item identifier **906** and the file identifier **908**. The computing device **808** may store the physical media item identifier **906** and the file identifier **908** in the same database entry **902** to indicate that the file identified by the file identifier **908** corresponds to the physical media item labeled with the label **106** that includes the barcode **122** whose barcode data matches the physical media item identifier **906**. For example, as shown in FIG. 9, the database entry **902(1)** includes the physical media item identifier **906** "827375-11" and the file identifier **908** "435678.zip." This database entry **902(1)** may indicate that the envelope containing photographic prints that includes the label **106** with the barcode **122** "827375-11" has been digitized, and that the ZIP folder identified with the file identifier **908** "435678.zip" contains the corresponding JPEG files that correspond to the photographic prints.

FIG. 10A depicts one embodiment of a physical media item-file index **1000**. In one embodiment, the computing device **808** may be operable to generate the physical media item-file index **1000**. The physical media item-file index **1000** may include a list of physical media item identifiers **906** and their corresponding file identifiers **908**. The physical media item-file index **1000** may include all of the physical media item identifiers **906** and file identifiers **908** that belong to a single customer digitization order. In one embodiment, the computing device **808** may send the physical media item-file index **1000** to the printer **802**, and the printer **802** may print the physical media item-file index **1000** on a sheet of paper. In some embodiments, the computing device may include the physical media item-file index **1000** in a file (e.g., a text file) that may be included on a DVD, thumb drive, or in a digital download folder accessible to the customer. The physical media item-file index **1000** allow a customer to determine which files the customer received back correspond to which labeled physical media items that the customer sent in to be digitized.

As depicted in FIG. 10A, the file identifier **908** may include a number appended to the customer digitization order number that increments for each physical media item. For example, the physical media item labeled with a label **106** that included the barcode **122** number "933563-04" may

have been a bundle of four photographs. The files corresponding to these four photographs may have been named "933563-04.jpg," "933563-05.jpg," "933563-06.jpg," and "933563-07.jpg," as shown in FIG. 10A. In other embodiments, as depicted in FIG. 10B, the file identifiers **908** for the bundle of photographs may include an additional number that is appended to the physical media item identifier **906** and that increments for each photograph in the bundle. As shown in FIG. 10B, the files corresponding to these four photographs may have been named "933563-04-01.jpg," "933563-04-02.jpg," "933563-04-03.jpg," and "933563-04-04.jpg."

In one embodiment, the computing device **808** may determine whether all of the physical media items associated with a single customer digitization order have been digitized. The computing device **808** may not complete the customer digitization order in response to one or more physical media items from the customer digitization order not having been digitized. Completing the customer digitization order may include marking, in the computing device **808** (e.g., in the database **900** or a storage medium of the computing device **808**), the customer digitization order as complete. Completing the customer digitization order may include repackaging the physical media items in the box, including the DVD or thumb drive in the box, or including the printed-out physical media item-file index **1000**.

In one embodiment, the software of the computing device **808** may operate in a rescanning mode. The rescanning mode may include the software operating to determine whether all of the physical media items from a single customer digitization order have been digitized. The barcode scanner **804** may rescan the barcodes **122** of the labels **106** disposed on the physical media items that are part of a customer digitization order. In response to the barcode scanner **804** scanning a barcode **122** of a label **106** disposed on a physical media item that has not been digitized, the computing device **808** may prevent the completion of the customer digitization order. The computing device **808** may display a message indicating that the physical media item has not been digitized. The computing device **808** may determine that the physical media item has not been digitized by retrieving the database entry **902** with the physical media item identifier **906** that corresponds to the barcode **122** that was just scanned, and determining that the file identifier **908** of the database entry **902** is empty, contains null data, etc. In response to determining that the physical media item has not been digitized, the computing device **808** may display a prompt to have the physical media item digitized using the physical media item converter **806**, as described above. The software may switch into a scanning mode so that the physical media item that was not previously digitized can be digitized and the file identifier **908** added to the database entry **902**, as described above.

In response to the computing device **808** determining that all physical media items associated with a single customer digitization order have been digitized. The computing device **808** may complete the customer digitization order. The physical media items may be replaced into the box, the printed out physical media item-file index **1000** may be placed into the box, the DVD or thumb drive containing the files of the digitized content of the physical media items may be placed into the box, and the label **106** of the customer shipping page **700** may be disposed on the box. This package may then be shipped to the customer so that the customer receives back his/her physical media items, and so that the customer receives the DVD or thumb drive and physical media item-file index **1000**. In some embodiments, in

response to the customer digitization order requesting a digital download, the computing device **808** completing the customer digitization order may include the computing device **808** providing a digital download to the customer. In one embodiment, the digital download may include the digitized content being stored in a location where the customer may download the digital content to his or her own device. For example, the digitized content may be stored in cloud storage or some other type of computer storage. The location of the digitized content on the cloud storage or other storage may be accessible by the customer, and the digitized content may be downloadable by the customer's device. In one embodiment, the computing device **808** may provide a link to the location of the digitized content, for example, by sending the link in an email to the customer's email address. In some embodiments, the digitized content may be stored on the cloud storage or other type of computer storage for a limited amount of time. For example, the customer may have 30 days to download the digitized content. In one embodiment, the digitized content may be stored on the cloud storage or other type of computer storage for a longer or shorter amount of time.

In some embodiments, the data stored by the database **900** may be stored in one or more files of a file system instead of in a database. The file system may include similar functions to the functions of the database. For example, the file system may be operable to generate files or portions of files that store customer order identifiers **904**, physical media item identifiers **906**, or file identifiers **908**. The file system may be operable to read data from these files or file portions. The file system may be operable to update the files or file portions. The file system may be operable to remove files or file portions.

FIG. **11A** and FIG. **11B** depict one embodiment of a method **1100**. The method **1100** may include a method of converting physical media to digital media. The method **1100** may include generating a database entry in a database (step **1102**). The database entry may include a physical media item identifier. The method **1100** may include sending a first package to a customer. The method **1100** may include obtaining a second package from the customer (step **1106**). The second package may include a physical media item. The method **1100** may include scanning, via a barcode scanner, a barcode disposed on a label adhered to the physical media item (step **1108**). The barcode may correspond to the physical media item identifier of the database entry.

The method **1100** may include converting, via a physical media item converter, content stored on the physical media item to a digital format (step **1110**). The method **1100** may include storing the digitally formatted content in a file of a computer-readable storage medium (step **1112**). The file may include a file identifier. The method **1100** may include storing, in the database entry, the file identifier (step **1114**). The method **1100** may include shipping a third package to the customer (step **1116**). The second package may include the physical media item. The method **1100** may include allowing the customer access to the digitally formatted content (step **1118**).

In one embodiment, the database may include the database **900** described above. The database entry may include a database entry **902** described above. Generating (step **1102**) a database entry may be similar to the computing device **808** generating a database entry **902**, as described above. The physical media item identifier may include the physical media item identifier **906** described above. Shipping (step **1104**) the first package to the customer may include printing the booklet **100** based on the customer

digitization order, disposing the booklet **100** inside a box, disposing a shipping label to the box, and shipping the box as the first package, as has been described above. Obtaining (step **1106**) the second package from the customer may include receiving the package (including the physical media items and the booklet **100**) shipped by the customer, as described above.

In some embodiments, the barcode scanner may include the barcode scanner **804**. The barcode disposed on the label adhered to the physical media item may include a barcode **122** disposed on a label **106** and disposed on a physical media item as described above. The barcode corresponding to the physical media item identifier of the database entry may include the barcode data of the barcode **122** matching the physical media item identifier **906** of the database entry **902** (because, for example, the computing device **808** generated the barcode **122** based on the physical media item identifier **906** from the database entry **902**, as described above). Scanning (step **1108**) the barcode may include the barcode scanner **804** scanning the barcode **122** and sending the barcode data to the computing device **808**, as described above.

In some embodiments, the physical media item converter may include the physical media item converter **806**, described above. Converting (**1110**) the content stored on the physical media item to the digital format may include the physical media item converter **806** scanning or reading the content from the physical media item and generating the plurality of electronic signals, as described above. Then, either the physical media item converter **806** may convert the electronic signals into the digital format in the form of the file, or the physical media item converter **806** may send the electronic signals to the computing device **808**, and the computing device **808** may convert the electronic signals into the file (step **1112**), as described above.

In one or more embodiments, the digitally formatted content may include the file. The computer-readable storage medium may include the computer-readable storage medium **812**, a different storage medium of the computing device **808**, or a storage medium in data communication with the computing device **808**, as described above. The file identifier may include the file identifier **908**, as described above. The file identifier corresponding to the digitally formatted content may include the file identifier **908** identifying the file that stores the digitized content from the corresponding physical media item. Storing (step **1114**) the file identifier may include storing the file identifier **908** in the corresponding database entry **902** of the database, as described above.

In some embodiments, shipping (**1116**) the third package to the customer may include shipping the box with the label from the customer shipping page **700** with the physical media items inside, as described above. Allowing (step **1118**) the customer access to the digitally formatted content may include including, in the second package, a portable computer-readable storage medium. The portable computer-readable storage medium may include a DVD or a thumb drive. The portable readable-storage medium may include the digitally formatted content, such as the one or more files generated from the digitization process described above. Allowing the customer access to the digitally formatted content may include allowing the customer access to the digitally formatted content comprises providing the customer with a link to a downloadable location where the digitally formatted content is stored. This may include sending an email to the customer with a link to a digital download, as described above.

In some embodiments, the barcode corresponding to the physical media item identifier of the database entry may include the barcode **122** (or the barcode data of the barcode **122**) matching the physical media item identifier **906** of the database entry **902**, as described above. In one embodiment, the database **900** may include multiple database entries **902** (for example, as seen in FIG. 9). Each physical media item identifier **906** may be unique among all database entries **902** of the multiple database entries **902** of the database **900**, as described above.

In one embodiment, the method **1100** may further include generating a physical media item-file index. The physical media item-file index may include the physical media item-file index **1000** described above. The physical media item-file index **1000** may include the physical media item identifier **906** and the corresponding file identifier **908**. The computing device **808** may retrieve these identifiers **906**, **908** from the database entries **902**, as described above. In some embodiments, the second package may include a printed copy of the physical media item-file index **1000**, as described above.

In some embodiments, the method **1100** may further include rescanning, via the barcode scanner, the barcode disposed on the label adhered to the physical media item. This may include the barcode scanner **804** rescanning the barcode **122** disposed on the label **106** disposed on a physical media item, as described above. The method **1100** may include determining whether the database entry that includes the physical media item identifier corresponding to the barcode includes a file identifier. For example, as described above, the computing device **808** may retrieve the database entry **902** that includes the physical media item identifier **906** received from the barcode scanner **804** and determine whether the database entry **902** includes the file identifier **908** or includes no data or null data instead. In response to the database entry **902** not including the file identifier **908**, the computing device **808** may present a notification via a user interface of the computing device **808** or may prevent the completion of the customer digitization order, as described above.

In one embodiment, the booklet **100** may include a pre-printed booklet. A pre-printed booklet may include a booklet **100** that is not customized based on a customer digitization order. Instead, the booklet **100** may include one or more barcode pages **400** with pre-printed physical media item labels **402** or upgrade physical media item labels **408**. The booklet **100** may include an upgrade page **500** with format upgrade labels **502**. Different pre-printed booklets **100** may have different numbers of each type of label **402**, **408**, **502**. For example, a first pre-printed booklet **100** may include a barcode page **400** with **10** pre-printed physical media item labels **402**, and a second pre-printed booklet **100** may include a barcode page **400** with **20** pre-printed physical media item labels **402**.

In some embodiments, the pre-printed booklet **100** may include an activation code. A customer may enter the activation code from the pre-printed booklet **100** and may enter his/her address into a webpage. The computing device **808** may receive the activation code and the address. The computing device **808** may look up the activation code in a database or other computer storage medium and determine information about the pre-printed booklet **100** (e.g., the customer order number, how many physical media item labels **402** the pre-printed booklet **100** includes, the digital format the physical media items will be returned in (e.g., DVD, digital download, etc.)). The computing device **808** may then generate database entries **902** based on the

retrieved information. Copies of pre-printed booklets **100** may be sold in stores, on the Internet, on a home shopping channel, or another channel of commerce.

FIG. **12A** and FIG. **12B** depict a method **1200**. The method **1200** may include a method of adding value to an item. The method **1200** may include printing a booklet (step **1202**). The booklet may include one or more labels. Each label of the one or more labels may include a barcode. The method **1200** may include disposing the booklet in a first package (step **1204**). The method **1200** may include shipping the first package to a customer (step **1206**). The method **1200** may include receiving a second package from the customer (step **1208**). The second package may include one or more items. Each item of the one or more items may include a label of the one or more labels of the first package disposed on the item. The method **1200** may include improving each of the one or more items of the second package (step **1210**). The method **1200** may include disposing each improved item of the one or more improved items in a third package (step **1212**). The method **1200** may include shipping the third package to the customer (step **1214**).

In one embodiment, the booklet, labels, and barcodes may be similar the booklet **100**, the labels **106**, or the barcodes **122**. Printing the booklet (step **1202**), disposing the booklet in the first package (step **1204**), shipping the first package to the customer (step **1206**), and receiving the second package from the customer (step **1208**) may be similar to the similar steps of the method **1100** or other parts of the disclosure, disclosed above.

In some embodiments, the items of the second package may include a variety of types of items. An item may include a physical media item, a piece of clothing, an accessory (e.g., a purse), a piece of art, a piece of equipment (e.g. a tool), a weapon (e.g., a firearm or knife), or some other type of item. Improving an item (step **1210**) may include refurbishing or adjusting the piece of clothing or the accessory, framing or restoring the piece of art, repairing the piece of equipment, repairing or refurbishing the weapon (e.g., cleaning the weapon, sharpening the knife, repairing the firearm, modifying the firearm, or adding an accessory to the firearm). In some embodiments, disposing each improved item of the one or more improved items in a third package (step **1212**) or shipping the third package to the customer (step **1214**) may be similar to the similar steps disclosed above regarding the method **1100** or disclosed elsewhere in this disclosure. In one embodiment, the method **1200** may include additional steps similar to those disclosed above, such as generating database entries, generating an item-improvement index, customizing the booklet based on customer order data, or other steps. A system similar to the system **800** may be used in connection with the method **1200**.

While the making and using of various embodiments of the present disclosure are discussed in detail herein, it should be appreciated that the present disclosure provides many applicable inventive concepts that are embodied in a wide variety of specific contexts. The specific embodiments discussed herein are merely illustrative of specific ways to make and use the invention and do not delimit the scope of the invention. Those of ordinary skill in the art will recognize numerous equivalents to the specific apparatus and methods described herein. Such equivalents are considered to be within the scope of this invention and may be covered by the claims.

Furthermore, the described features, structures, or characteristics of the disclosure may be combined in any suitable manner in one or more embodiments. In the description

contained herein, numerous specific details are provided, such as examples of programming, software, user selections, hardware, hardware circuits, hardware chips, or the like, to provide understanding of embodiments of the disclosure. One skilled in the relevant art will recognize, however, that the disclosure may be practiced without one or more of the specific details, or with other methods, components, materials, and so forth. In other instances, well-known structures, materials, or operations may not be shown or described in detail to avoid obscuring aspects of the disclosure.

These features and advantages of the embodiments will become more fully apparent from the description and appended claims, or may be learned by the practice of embodiments as set forth herein. As will be appreciated by one skilled in the art, aspects of the present disclosure may be embodied as an apparatus, system, method, computer program product, or the like. Accordingly, aspects of the present disclosure may take the form of an entirely hardware embodiment, an entirely software embodiment (including firmware, resident software, micro-code, etc.) or an embodiment combining software and hardware aspects that may all generally be referred to herein as a "circuit," "module," or "system." Furthermore, aspects of the present disclosure may take the form of a computer program product embodied in one or more computer-readable medium(s) having program code embodied thereon.

In some embodiments, a module may be implemented as a hardware circuit comprising custom VLSI circuits or gate arrays, off-the-shelf semiconductors such as logic chips, transistors, or other discrete components. A module may also be implemented in programmable hardware devices such as field programmable gate arrays, programmable array logic, programmable logic devices or the like.

Modules may also be implemented in software for execution by various types of processors. An identified module of program code may, for instance, comprise one or more physical or logical blocks of computer instructions which may, for instance, be organized as an object, procedure, or function. Nevertheless, the executables of an identified module need not be physically located together, but may comprise disparate instructions stored in different locations which, when joined logically together, comprise the module and achieve the stated purpose for the module.

Indeed, a module of program code may be a single instruction, or many instructions, and may even be distributed over several different code segments, among different programs, and across several memory devices. Similarly, operational data may be identified and illustrated herein within modules, and may be embodied in any suitable form and organized within any suitable type of data structure. The operational data may be collected as a single data set, or may be distributed over different locations including over different storage devices, and may exist, at least partially, merely as electronic signals on a system or network. Where a module or portions of a module are implemented in software, the program code may be stored and/or propagated on in one or more computer-readable medium(s).

In some embodiments, a module may include a smart contract hosted on a blockchain. The functionality of the smart contract may be executed by a node (or peer) of the blockchain network. One or more inputs to the smart contract may be read or detected from one or more transactions stored on or referenced by the blockchain. The smart contract may output data based on the execution of the smart contract as one or more transactions to the blockchain. A smart contract may implement one or more methods or algorithms described herein.

The computer program product may include a computer-readable storage medium (or media) having computer-readable program instructions thereon for causing a processor to carry out aspects of the present disclosure. The computer-readable storage medium can be a tangible device that can retain and store instructions for use by an instruction execution device. The computer-readable storage medium may be, for example, but is not limited to, an electronic storage device, a magnetic storage device, an optical storage device, an electromagnetic storage device, a semiconductor storage device, or any suitable combination of the foregoing. A non-exhaustive list of more specific examples of the computer-readable storage medium may include a portable computer diskette, a hard disk, a random access memory ("RAM"), a read-only memory ("ROM"), an erasable programmable read-only memory ("EPROM" or Flash memory), a static random access memory ("SRAM"), a hard disk drive ("HDD"), a solid state drive, a portable compact disc read-only memory ("CD-ROM"), a digital versatile disk ("DVD"), a memory stick, a floppy disk, a mechanically encoded device such as punch-cards or raised structures in a groove having instructions recorded thereon, and any suitable combination of the foregoing. A computer-readable storage medium, as used herein, is not to be construed as being transitory signals per se, such as radio waves or other freely propagating electromagnetic waves, electromagnetic waves propagating through a waveguide or other transmission media (e.g., light pulses passing through a fiber-optic cable), or electrical signals transmitted through a wire.

Computer-readable program instructions described herein can be downloaded to respective computing/processing devices from a computer-readable storage medium or to an external computer or external storage device via a network, for example, the Internet, a local area network, a wide area network and/or a wireless network. The network may comprise copper transmission cables, optical transmission fibers, wireless transmission, routers, firewalls, switches, gateway computers and/or edge servers. A network adapter card or network interface in each computing/processing device receives computer-readable program instructions from the network and forwards the computer-readable program instructions for storage in a computer-readable storage medium within the respective computing/processing device.

Computer-readable program instructions for carrying out operations of the present disclosure may be assembler instructions, instruction-set-architecture (ISA) instructions, machine instructions, machine dependent instructions, microcode, firmware instructions, state-setting data, or either source code or object code written in any combination of one or more programming languages, including an object oriented programming language such as Smalltalk, C++ or the like, and conventional procedural programming languages, such as the "C" programming language or similar programming languages. The computer-readable program instructions may execute entirely on the user's computer, partly on the user's computer, as a stand-alone software package, partly on the user's computer and partly on a remote computer or entirely on the remote computer or server. In the latter scenario, the remote computer may be connected to the user's computer through any type of network, including a local area network (LAN) or a wide area network (WAN), or the connection may be made to an external computer (for example, through the Internet using an Internet Service Provider). In some embodiments, electronic circuitry including, for example, programmable logic circuitry, field-programmable gate arrays (FPGA), or pro-

programmable logic arrays (PLA) may execute the computer-readable program instructions by utilizing state information of the computer-readable program instructions to personalize the electronic circuitry, in order to perform aspects of the present disclosure.

Aspects of the present disclosure are described herein with reference to flowchart illustrations or block diagrams of methods, apparatuses, systems, algorithms, or computer program products according to embodiments of the disclosure. It will be understood that each block of the flowchart illustrations and/or block diagrams, and combinations of blocks in the flowchart illustrations and/or block diagrams, can be implemented by computer-readable program instructions.

These computer-readable program instructions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data processing apparatus, create means for implementing the functions/acts specified in the flowchart and/or block diagram block or blocks. These computer-readable program instructions may also be stored in a computer-readable storage medium that can direct a computer, a programmable data processing apparatus, and/or other devices to function in a particular manner, such that the computer-readable storage medium having instructions stored therein comprises an article of manufacture including instructions which implement aspects of the function/act specified in the flowchart and/or block diagram block or blocks.

The computer-readable program instructions may also be loaded onto a computer, other programmable data processing apparatus, or other device to cause a series of operational steps to be performed on the computer, other programmable apparatus or other device to produce a computer implemented process, such that the instructions which execute on the computer, other programmable apparatus, or other device implement the functions/acts specified in the flowchart and/or block diagram block or blocks.

The schematic flow chart diagrams included herein are generally set forth as logical flow chart diagrams. As such, the depicted order and labeled steps are indicative of one embodiment of the presented method. Other steps and methods may be conceived that may be equivalent in function, logic, or effect to one or more steps, or portions thereof, of the illustrated method. Additionally, the format and symbols employed are provided to explain the logical steps of the method and are understood not to limit the scope of the method. Although various arrow types and line types may be employed in the flow chart diagrams, they are understood not to limit the scope of the corresponding method. Indeed, some arrows or other connectors may be used to indicate only the logical flow of the method. For instance, an arrow may indicate a waiting or monitoring period of unspecified duration between enumerated steps of the depicted method. Additionally, the order in which a particular method occurs may or may not strictly adhere to the order of the corresponding steps shown.

The schematic flowchart diagrams and/or schematic block diagrams in the Figures illustrate the architecture, functionality, and operation of possible implementations of apparatuses, systems, methods and computer program products according to various embodiments of the present disclosure. In this regard, each block in the schematic flowchart diagrams and/or schematic block diagrams may represent a module, segment, or portion of code, which comprises one

or more executable instructions of the program code for implementing the specified logical function(s).

It should also be noted that, in some alternative implementations, the functions noted in the block may occur out of the order noted in the Figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved. Other steps and methods may be conceived that are equivalent in function, logic, or effect to one or more blocks, or portions thereof, of the illustrated Figures.

Although various arrow types and line types may be employed in the flowchart and/or block diagrams, they are understood not to limit the scope of the corresponding embodiments. Indeed, some arrows or other connectors may be used to indicate only the logical flow of the depicted embodiment. For instance, an arrow may indicate a waiting or monitoring period of unspecified duration between enumerated steps of the depicted embodiment. It will also be noted that each block of the block diagrams and/or flowchart diagrams, and combinations of blocks in the block diagrams and/or flowchart diagrams, can be implemented by special purpose hardware-based systems that perform the specified functions or acts, or combinations of special purpose hardware and program code.

Thus, although there have been described particular embodiments of the present disclosure of a new and useful BARCODE BOOKLET, it is not intended that such references be construed as limitations upon the scope of this disclosure.

What is claimed is:

1. A system, comprising:

- a printer;
 - a barcode scanner;
 - a physical media item converter operable to read content stored on a physical media item and convert the content into a digital format; and
 - a computing device, including
 - a processor, and
 - a computer-readable storage medium including a plurality of computer-executable instructions, wherein the computer-executable instructions, when executed by the processor, cause the processor to generate a plurality of barcodes, send the plurality of barcodes to the printer, receive, from the barcode scanner, a physical media item identifier corresponding to a barcode of the plurality of barcodes, receive, from the physical media item converter, the content stored on the physical media item converted into the digital format, store the digitally formatted content in a file on the computer-readable storage medium, wherein the file includes a file identifier, and store, in a database entry of a database, the physical media item identifier and the file identifier;
- wherein the printer is operable to print a booklet, including
- a plurality of booklet pages, including a first multi-layer page and a second multi-layer page, and
 - a binding that joins the plurality of booklet pages, wherein
 - the first multi-layer page includes a barcode page, wherein the barcode page includes a first plurality of labels, each label of the first plurality of labels including a barcode of the plurality of barcodes, and

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the second multi-layer page includes an upgrade page, wherein the upgrade page includes a second plurality of labels, each label of the second plurality of labels including a barcode of the plurality of barcodes, and upgrade information indicating at least one of a digital format for receiving digitized content, or price information for converting the content into the digital format.

2. The system of claim 1, wherein the barcode scanner includes at least one of:

- a laser scanner;
- light-emitting diode (LED) scanner; or
- a camera-based barcode reader.

3. The system of claim 1, wherein the physical media item converter comprises a flatbed scanner.

4. The system of claim 1, wherein the physical media item converter comprises at least one of:

- a videocassette recorder; or
- a film-to-video converter.

5. The system of claim 1, wherein the physical media item converter comprises a tape cassette player.

6. The system of claim 1, wherein the database entry further comprises a customer order identifier, wherein the customer order identifier includes text identifying a customer digitization order.

7. The system of claim 1, wherein each label of the first plurality of labels further includes identifier information, including printed information including the physical media item identifier.

8. A method of converting physical media to digital media, comprising:

generating a database entry in a database, wherein the database entry includes a physical media item identifier;

obtaining a package from a customer, wherein the package includes a physical media item;

scanning, via a barcode scanner, a barcode disposed on a label adhered to the physical media item, wherein the barcode corresponds to the physical media item identifier of the database entry;

converting, via a physical media item converter, content stored on the physical media item to a digital format; storing the digitally formatted content in a file on a computer-readable storage medium, wherein the file includes a file identifier;

storing, in the database entry, the file identifier;

shipping a second package to the customer, wherein the second package includes the physical media item;

allowing the customer access to the digitally formatted content; and

printing a booklet, wherein the booklet includes a plurality of booklet pages, including a first multi-layer page and a second multi-layer page, and a binding that joins the plurality of booklet pages, wherein

the first multi-layer page includes a barcode page, wherein the barcode page includes the label, and

the second multi-layer page includes an upgrade page, wherein the upgrade page includes a plurality of second labels, each second label of the plurality of second labels including a barcode and upgrade information indicating at least one of a digital format for receiving digitized content, or price information for converting the content into the digital format.

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9. The method of claim 8, wherein the barcode corresponding to the physical media item identifier of the database entry comprises the barcode matching the physical media item identifier of the database entry.

10. The method of claim 8, wherein:

the database includes a plurality of database entries; and the physical media item identifier is unique among all database entries of the plurality of database entries.

11. The method of claim 8, wherein allowing the customer access to the digitally formatted content comprises including, in the second package a portable computer-readable storage medium, wherein the portable readable-storage medium includes the digitally formatted content.

12. The method of claim 8, wherein allowing the customer access to the digitally formatted content comprises providing, to the customer, a link to a downloadable location whereon the digitally formatted content is stored.

13. The method of claim 8:

further including generating a physical media item-file index, wherein the physical media item-file index includes the physical media item identifier and the corresponding file identifier of the database entry; and wherein the second package includes a printed copy of the physical media item-file index.

14. The method of claim 8, further comprising:

rescanning, via the barcode scanner, the barcode disposed on the label adhered to the physical media item; determining whether the database entry that includes the physical media item identifier corresponding to the barcode includes a file identifier; and in response to the database entry not including the file identifier, presenting a notification via a user interface, and preventing completion of a digitization order.

15. The method of claim 8, wherein the label adhered to the physical media item further includes identifier information, including printed information including the physical media item identifier.

16. A method of converting physical media to digital media, comprising:

generating a database entry in a database, wherein the database entry includes a physical media item identifier;

printing a booklet, wherein the booklet includes a plurality of booklet pages, including a first multi-layer page and a second multi-layer page, and a binding that joins the plurality of booklet pages, wherein

the first multi-layer page includes a barcode page, wherein the barcode page includes a label, and

the second multi-layer page includes an upgrade page, wherein the upgrade page includes a plurality of second labels, each second label of the plurality of second labels including a first barcode and upgrade information indicating price information for converting content into a digital format;

obtaining a package from a customer, wherein the package includes a physical media item;

scanning, via a barcode scanner, a second barcode disposed on the label adhered to the physical media item, wherein the second barcode corresponds to the physical media item identifier of the database entry;

converting, via a physical media item converter, content stored on the physical media item to the digital format;

storing the digitally formatted content in a file on a computer-readable storage medium, wherein the file includes a file identifier;

storing, in the database entry, the file identifier;

shipping a second package to the customer, wherein the 5

second package includes the physical media item; and

allowing the customer access to the digitally formatted content.

17. The method of claim **16**, wherein the label adhered to the physical media item further includes identifier information, including printed information including the physical 10 media item identifier.

18. The method of claim **16**, wherein the physical media item comprises at least one of:

a videocassette; 15

a film reel;

a photo print; or

an audio tape cassette.

19. The method of claim **16**, wherein:

the plurality of booklet pages further includes a third 20

multi-layer page;

the third multi-layer page includes a shipping page;

the shipping page includes a printed shipping label; and

the package from the customer includes the shipping label

disposed on the package. 25

20. The method of claim **16**, wherein allowing the customer access to the digitally formatted content comprises storing the digitally formatted content in cloud storage.

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